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American
COLONIAL
ARCHITECTURE

ITS ORIGIN & DEVELOPMENT

By JOSEPH JACKSON

Illustrated

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DAVID McKAY CO.
WASHINGTON SQUARE

JOHNSON REPRINT CORPORATION
111 Fifth Avenue, New York, N.Y. 10003
JOHNSON REPRINT COMPANY LTD.
Berkeley Square House, London, W1X6BA

SERIES IN AMERICAN STUDIES

Editor-in-Chief: Joseph J. Kwiat

PROGRAM IN AMERICAN STUDIES
UNIVERSITY OF MINNESOTA

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First reprinting, 1969, Johnson Reprint Corporation
Printed in the U.S.A.

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FOREWORD

Some European writers on architecture have declared that the single contribution of the United States to the history of architectural design was the "skyscraper," as our tall office buildings have been rather happily and suggestively termed. But it is believed that as time wears on it will be recognized that the interpretative expression given in the American Colonies to the classic revival in the eighteenth century, which is rather loosely called Colonial Architecture, has resulted in the formation of a native style just as individual to this country as is the "skyscraper."

In an effort to show the origin of this style and the circumstances under which it was developed—not by trained and talented architects, but by hard-working carpenters—this book was written.

It is in brief a rapid survey of the manners of the Colonists, rather than a work on architectural designing, and was intended to show the causes which led to the adoption of what we call the Colonial Style.

No similar work seen by the writer has given any attention to the French Colonial design in America. To include this it has of course been necessary to pass the national boundary of the United States and enter Canada, where part of the French Colonies lay.

Naturally, the small size of this book precludes any claim to exhaustive treatment of the subject; and instead of being definitive in character, it has only been designed to be suggestive.

Finally it should be stated that the following chapters were first printed in the magazine, *Building*, of which the writer is editor.

JOSEPH JACKSON

Philadelphia, May, 1924

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American Colonial Architecture

CHAPTER I

BEGINNINGS

AMERICAN Colonial Architecture in the average mind describes a style of building with which it is more or less familiar, yet that term should be used with more discrimination, because Colonial Architecture existed in what is now the United States before the Tudors as a dynasty, passed in England, and that style which is now so popular for certain types of buildings, did not make its advent until nearly a century and a half later.

In this review of the rise of Colonial building, we shall go back to the beginning. It should be understood that the first settlers in this country did not come over armed with architectural plans, or have any high idealistic schemes for beautifying their new home. It was a hard existence, such as pioneers in all lands in all times have encountered; it differed only in degree from the experiences of other adventurers in new lands.

In even more recent times we have had something of the same kind of history in the building of the West. No one will believe that the hardy men and women who crossed the great Plains in the "Prairie Schooners," and had to occasionally fight pugnacious Indians on the way, took with them any volumes on architectural styles to be used in building their homes. As a matter of fact, they did not always know where they would locate their homes, and local conditions, availability of materials, together with their fitness for the struggle, and other things contributed a great deal towards influencing their decision.

Going back three centuries or thereabouts, we find settlers from the other side of the Atlantic erecting for themselves the crudest sort of dwellings. Usually they were constructed of logs, which the country afforded by its boundless forests. This kind of building also was strong enough to withstand the onslaughts of the savages, who did not add anything to the enjoyment of the newcomers. Even a century later, settlers in Pennsylvania, landing in a so-called city, which was being rapidly built on a real plan, were content to live for a time in caves dug out of the side of the embankment bordering the Delaware River.

In nearly all of the early voyages of settlers to this country from England, there came out with the ships, artisans of various kinds. Naturally there was a goodly representation of housewrights, for the immigrants had to have houses in which to live, and could not take them along in sections as settlers today may, if they so desire.

HOW HISTORY IS MADE

This building, which was in Appletree Street, west of Fourth, was neither the first brick house in Philadelphia nor were its bricks brought from England. It is now removed, but dated from about 1715

The ships were small ones, and consequently could not take either large cargoes or many passengers. This fact should be sufficient answer to those persons who have a lingering belief that bricks for the houses in the new land were brought from England. As there was to be found here ample materials for the manufacture of brick, and they could be made as satisfactorily as they could be had in the motherland, it would have been little less than folly and reckless expenditure, to have attempted to import this kind of building material from the other side of the Atlantic. It might be added by way of comment that there are no indications that the settlers in any of the colonies were foolish or extravagant in matters of this kind.

In seeking the origin of the styles of buildings and of the manner of their construction, it is found that in the colonies the differences in construction is traceable to the parts of the old country from which the majority of the immigrants came. It was the most natural thing in the world for them to bring with them impressions of their native places, and on the part of the workmen it was just as natural for them to erect dwellings more or less in the same way they had been accustomed to do in their old homes. Always to be taken into consideration, however, was the factor of the availability of materials and tools necessary for the operations.

In the majority of books dealing with so-called Colonial architecture, more attention is paid to the genealogy of the families occupying the houses

regarded as historic, than to the history of the building of these houses. In many instances these records appear to be lost. At the same time there prevails an impression that all Colonial architecture is English in origin, because of a more or less narrow interpetation of the word Colonial. It is true that in the English colonies on the Atlantic seaboard, English manners, styles and customs prevailed, but there was another part of the present territory along the same seaboard that was not English, at the time it was settled, nor until many years afterward.

Thus we have in Florida some examples of Spanish architecture. Most of it, however, is admittedly not so old as it looks. There are, nevertheless, evidences of the Spanish buildings in St. Augustine, and it will be shown later that some of this building in the peninsula actually had an influence on some northern architecture.

In Louisiana, especially in New Orleans, there are examples of French, and Spanish Architecture, dating back to the days when that great territory was a colony first of France, then of Spain, and again of France.

From these statements it will be seen that when we discuss American Colonial Architecture we should be comprehensive enough to include the styles prevailing in the colonies of Spain and France in this country. The Spanish architecture on the Pacific coast, while also American Colonial in the same sense, was so isolated that it really, until more recent years, had no appreciable influence upon architectural design in the United States.

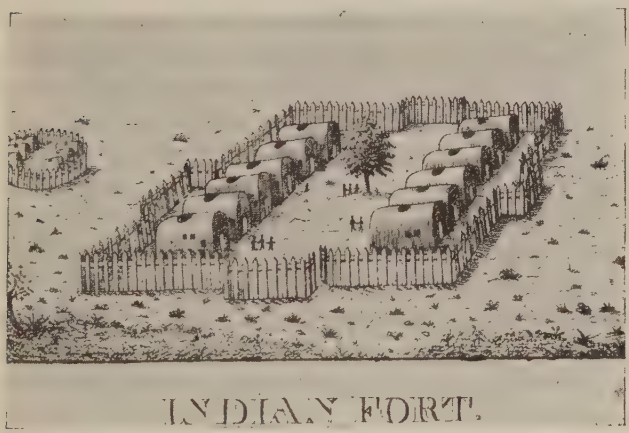
There are several clearly defined periods of American Colonial architecture. Roughly these may be said to be, *a*, that of the original settlers, and for the first fifty years of colonization; *b*, the next half century, or until the advent of the House of Hanover to the British throne, and *c*, that which had its development during the reigns of the first three Georges. The last, naturally, showed the most regard for classic taste, and is the period generally studied by all who go in for Colonial Architecture.

These same periods may again be defined as being the period of the pioneers, the period of building from books, and the period of both books and Americanization of the styles.

As we have seen, the original settlers had something else to think of than the erection of handsome mansions. Indeed, they were supremely happy if they could build a comfortable dwelling, which would keep out savages and the cold winters, and permit its residents to improve their lot. Conditions, as was to be expected, differed in various parts of the country. Some colonies were begun with more care, and upon more of a plan than others. Thus, we see the Pilgrims landing on shores they knew little or nothing of. They were true, hardy adventurers. They had faith, and a burning desire for freedom of thought. Their creature comforts were few, and not given a very prominent place in their philosophy.

The entire lack of precautions, planning, and management which the first English settlers dis-

played at Roanoke, Island, is one of the tragedies of history, and the settlement at Jamestown was little better. On the other hand, the settlement of Pennsylvania was the only one that was deliberately planned, and planted in a more or less happy situation. The colony of New York, by reason of its Dutch origin, fared almost as well. It must be remembered, however, that Pennsyl-



TYPE OF WIGWAM COPIED BY EARLIEST SETTLERS IN THE COLONIES
From Description of New Sweden by Thos. Campanius Holm

vania had been settled successfully by the English after part of it had been a backward colony of Sweden. The Swedes were thrifty as a people, but not so enterprising as the English of their day, and we do not find many traces of their architecture in any building today, although the Old Swedes' Churches in Wilmington and Philadelphia, both built long after English occupation,

and said to be copies of edifices to be found in Sweden, were not constructed by Swedes, and display as much English as they do Swedish in their design.

When colonists did begin to build permanent homes for themselves, they invariably and rather naturally, followed the styles prevalent in their native lands. To this it should be understood that they were, of course, influenced by their environment. In other words, they Americanized their architecture. This deviation was virtually forced upon them by reason of the changed conditions, the handiness of building materials, the kind of place in which they settled, and the kind and supply of labor for the purpose. While they had no architectural ideals to voice or to give materialization to dreams of improvement, they will be found to have met the problem that presented itself to them and to have solved it admirably.

It cost a great deal of money for the times for an emigrant to take his family to the New World; the voyage was both long and dangerous, and as a consequence we find that the original settlers, excepting those who were experienced tradesmen and mechanics, some of whom were given inducements to emigrate, were all persons of substance; some of them were of good family, and accustomed to the small comforts which the early centuries afforded. Understanding this then we are able to reconstruct in our minds the kind of habitations they erected for their shelter and their homes.

Many of the immigants were persons of education, and even accomplishment, and all of them were persons of intelligence, determination and courage. It is only to quote from experience to infer that persons of this character had the fortitude necessary to temporarily put up with the inconveniences their new situation placed them in.

We read in contemporary works that the early settlers in Virginia lived in wigwams, undoubtedly fashioned more or less like those of the Indians they found there; in New England they built themselves rough log huts, close to fortifications to protect themselves from attack by savage Indians; in Pennsylvania, the Swedes built themselves log cabins, and the English and Germans when they arrived were content to live in caves until their houses were erected.

All these circumstances had a great deal to do with the formation of a distinctive style of architecture; a style that was indigenous, and Colonial in the broadest sense of the term.

There were in existence at the time of the settlement, at least of the Middle Colonies, books intended to guide the home builder and carpenter, and at the beginning of the desire for better houses, and more modern comforts, these books played a larger part than probably is realized today.

We are able to make a statement of this kind from a study of some of the buildings of the Eighteenth, or even the Seventeenth century which remain. For instance, we can within a

reasonable margin for error, maintain that the original plan of the Slate Roof House, which was erected for Samuel Carpenter in Philadelphia, and which obtained its fame from having once been the residence of William Penn, the founder of the Province of Pennsylvania, was based upon a design shown in one of these volumes. Also, from the same sort of evidence, we are able to point to the original of the State House group of buildings, in Philadelphia, that are now known as Independence Hall. Buildings in other sections of the country may also be traced back in the same manner to plans to be found in some of these ancient volumes.

Books were fairly plentiful in the New England and Middle Colonies before they were easily available in the South. In Virginia, for instance, education was very meagre, and it is generally known that Washington, himself, a son of a rich family, had very few educational advantages. Some of the planters in the South sent their sons to England, and these, of course, were very highly educated. William Byrd, of Westover, Virginia, is a brilliant example of this European education. He was called to the bar in Middle Temple while quite a young man, or shortly before 1700.

During the reign of George I, the Bishop of London, in the course of gathering data regarding the Colonies, sent a questionnaire to the clergy in Virginia. He received answers to his paper that must have been far from convincing of the high character of the intelligence of this part of the world. To his question, "Are there any schools

in your parish?" only two answered in the affirmative. To the question, "Is there a parish library?" the universal reply was, "None." One clergyman, probably more ashamed than the others, explained that they had "The Book of Homilies, The Whole Duty of Man, and the Singing Psalms."

While it may be true that the questionnaire does not prove that there was no education or books in Virginia at the time, it does show that, generally speaking, the inhabitants were ignorant of either advantages. It will be shown that it was not until architectural books of ambitious character had been imported that the Georgian houses which we so properly admire today, were built.

Probably no incident had more influence upon the modernizing of architecture in England and, in due course, that of the American Colonies, than the Great Fire of London, which occurred in 1666, when thirteen thousand houses, and ninety churches were destroyed, the whole City of London, from the Temple to the Tower being laid waste.

As might be imagined the rebuilding of so vast a section in a metropolis called for architects. The situation also called for something better than had been destroyed, and under this inspiration came forth Sir Christopher Wren, and numerous others not so well recalled to this generation. It should not be inferred that Wren was unknown until after the Fire, for at the time he was the leading figure in architecture in England, but the Fire did inspire him to do some of the master-

INTERIOR OF SPANISH FORT, ST. AUGUSTINE, FLA.
Built in 16th and 17th centuries

pieces, especially in church architecture, connected with his name, and these had an immense bearing upon the whole school of English architectural design, and naturally influenced work done in the Colonies, although not immediately.

London had to be rebuilt, and all architects and builders in the city or close to it were called upon to assist in the immense work. Now there appeared more numerous than ever publications intended for the instruction of builders and owners. There had, of course, been in existence folios, especially the works of Vitruvius, and Palladio, and one of Inigo Jones, one of the earliest followers of Palladio in England. Some of John Webb's work, the pupil and successor of Jones, also was known, but the rebuilding of London after the fire inspired a whole library of little volumes intended to be helpful to the city and country builder.

Some of these volumes evidently found their way across the Atlantic, but the one which seems to have left the largest impression was "The City and Country Purchaser and Builder," by Stephen Primatt. The first edition appeared soon after the Fire ,in 1667, and the second edition, whose title page announced that it was "Much Enlarged, by William Leybourne," was published in 1680. As the important plates are identical in both editions, that reproduced here is from the second edition.

This "Platform" shows the ground layout of a "Mansion House," and, as we shall explain further along, this design appears to have been the

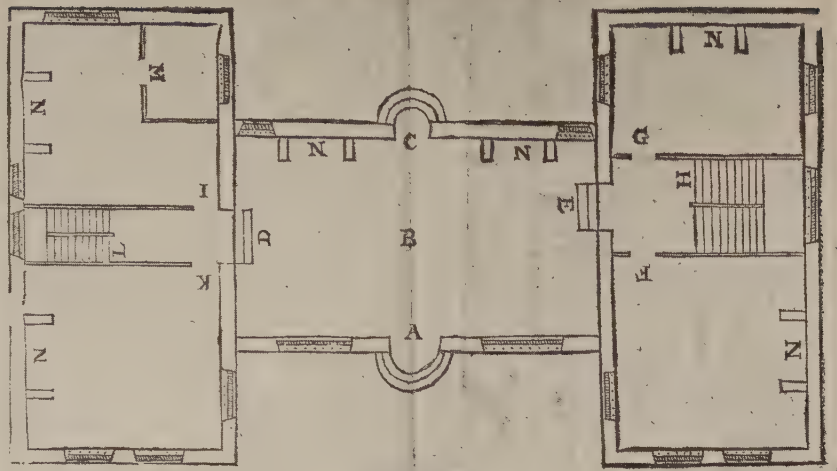
ground work for several large houses in Philadelphia, and probably in some other sections of the country. Slightly modified, it seems to have been a popular design.

Before the Great Fire, there had appeared "The First Book of Architecture by Andrea Palladio." This was translated by Godfrey Richards, and he added to it an "Appendix Touching Doors and Windows by Pr. Le Muet." This work, a small quarto, was issued in 1663, and contained designs of floors and the manner of framing houses after the best manner of English building. The designs of doors and windows copied from the French, do not appear to have been adopted in any early design for houses in the Colonies. Indeed, for the great part, they were too ambitious for any mere colonial local carpenter or carver to attempt. The framing, however, seems to have been influential in the construction of some early buildings in the Colonies.

This little volume of Palladio about half a century after it was published, and at a time when the leading men in the Colonies had begun to accumulate fortunes, was of value to the carvers and joiners who were responsible for some of the lovely wood work that has survived.

A volume which probably had a greater influence on much of the woodwork to be found in the Georgian houses still standing, was John Wood's "Dissertation upon the Orders of Columns, and their Appendages," etc. To this was added a brief account of the various kinds of Intercolumnation. Wood was a Bath architect, and has

A Platform for a Manſion-houſe.



A The Paſſage into the Hall.
B The Hall.
C The Paſſage into the Garden.
D and E Steps entring into the Parlors and Kitchin.
F The great Parlor.
G The little Parlor.
H The great pair of Stairs leading up to the Dining-room over the Hall.
I The Kitchin.
K A place for a Brew-houſe, Waſh-houſe, or the like.
L The back-pair of Stairs.
M A Paſtery, or Larder.
N The Chimneys.

to his credit several very showy houses in the neighborhood of fashionable Bath.

Wood's plates give measured details of columns, with their bases and capitals, and generally wrote a useful and interesting book. His Dissertation is interesting, especially for his view that the Grecian Orders of Columns were derived from the Temple of Solomon in Jerusalem. He insisted that the Greeks copied their architecture after the Israelites had adapted the styles of the more ancient wooden columns to stone ones.

Some little pocket books for the use of builders, and treating of the science of measuring or estimating work, were more or less plentiful in the later Seventeenth and through the Eighteenth centuries. William Salmon, Jr., of Colchester, in Essex, published "The Country Builder's Estimator, or, the Architect's Companion." This volume, first issued early in the Eighteenth century, ran through many editions. The elder William Salmon, published a work that was not unknown in the Colonies: "Palladio Londinensis," 1743. This quarto contains many plates that proved useful to the Colonial builder. One of the earliest "Measurer's Guides," was that published by John Barker. The second edition, the only one the writer has seen, bears the date of 1718. From the elementary character of the book, which was devised as a popular work by Barker, who was an engineer, one judges that it must have met a real want in a country that was undergoing the first stages of development. A more business-like book on the subject was that of William Salmon,

the author of "Palladio Londinensis." His book was entitled, "The London and Country Builder's Vade Mecum: or, The Compleat and Universal Architect's Assistant." It bears the date of 1745.

These volumes detail not only the current prices for materials and labor, but the manner of estimating each mechanic's work, for all were not paid on the same basis. Thus glaziers worked by the superficial foot, masons by foot measure, either lineal, square, or cubical, as the author explains; plasterers by the square yard; bricklayers, on a wall, were paid by the square rod, or sixteen feet and a half squared; while carpenters on surface work, paid by the "square," or 100 square feet. There were, of course, detailed charges for joining, carving, making doors, windows, frontispieces, over doorways, etc. The same method of estimating or calculating housewright's work was followed in this country, only the price paid differing from that of London, or in the English provinces.

Those were before the days of blueprints, and while the principal designs for a building were drawn upon vellum or parchment, the working drawings to be handed to the mechanics were of paper, but occasionally, for the purpose of conserving them better, these, too, may have been drawn upon parchment.

The first Colonists to arrive did not need glaziers, because glass was so high and scarce that there even were houses in England that were lighted in the daytime by means of oiled linen. This was the first material used in windows in

the Colonies, but it should be explained that this was merely a stopgap, a temporary expedient, and probably no ancient house now standing in this country was so lighted when it was erected. In the Middle Colonies, at least, glass works were among the early industries to be started, and until they were fairly well begun glass was imported from Europe. Some other essential features of a dwelling house were imported from time to time, but the often repeated tradition that bricks were brought from England is based upon no known facts, and, on the whole is not entitled to attention. Some Dutch tiles may have found their way to this country, and some similar terra cotta work may have been imported, but bricks sufficient in quantity to build a large house of the period, certainly never were part of the cargo of any ship that came across the Atlantic in Colonial days.

CHAPTER II

IN VIRGINIA BEFORE 1700

VIRGINIA, at the time when the American territories were being parceled out to colonization companies by the British king, extended from what is now Cape Fear, in North Carolina, to Eastport, Maine. As a matter of fact this region was divided into the domains of two Virginia companies—the London, or first Virginia Company, which was assigned to the country between the 34th and the 41st degrees of North Latitude, and the Second, or Plymouth Virginia Company, which was given the territory between the 38th and the 45th degrees. This was done under charters signed in April, 1606, and this little discrepancy, which allowed of the overlapping of three degrees, or between the 38th and the 41st meridians which seemed to pass unnoticed at the time when all the coast was a wilderness, was the origin of a century of dispute over boundaries.

As the London Virginia Company, which sent

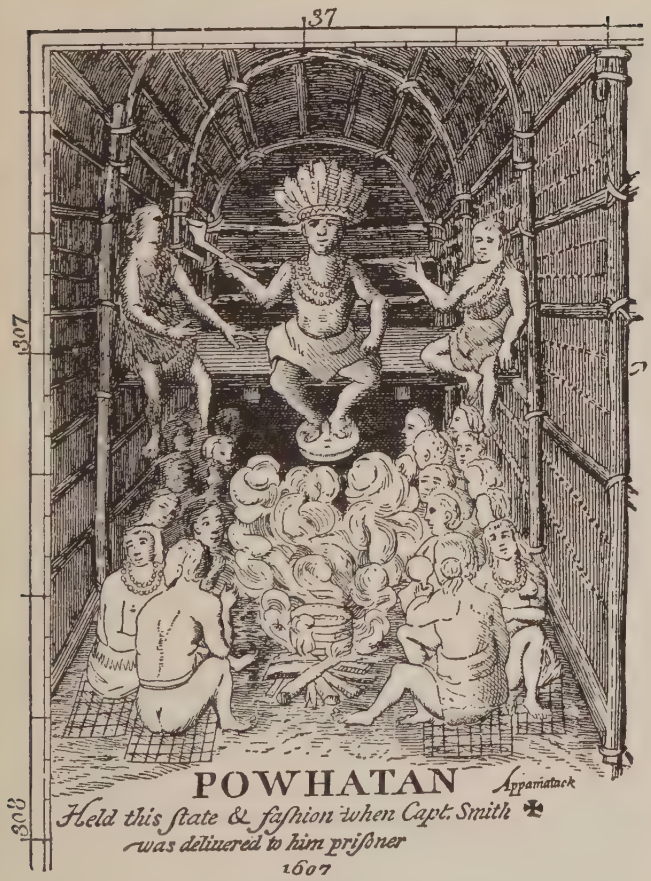
out Captain John Smith, a real adventurer, got under way long before the other had even looked over the ground, as is very well known, Jamestown was founded long before the first Pilgrim ship landed at Plymouth.

This first serious venture at colonization in North America by the English was not altogether a success. The first colonists were not really colonists, but adventurers pure and simple, who came out to find gold, make themselves rich and return to London to spend it.

William Byrd, of Westover, reviewing the origins of Virginia, speaks of the early attempts to settle it in a rather humorous manner. He said the first colony consisted of "about a hundred men, most of them reprobates of good families," and that at Jamestown, "like true Englishmen, they built a church that cost no more than fifty pounds and a tavern that cost five hundred."

He thought the colonists should have married Indian women, contending, "morals and all considered, I can't think the Indians much greater heathens than the first adventurers, who, had they been good Christians, would have had the charity to take this only method of converting the natives to Christianity." Byrd jokes about attempting to start a colony with "a hundred bachelors."

It is not at all strange that during the first year at Jamestown very few houses were erected. In the first place, as has been related, perhaps few of the colonists intended to remain any longer than was necessary to make their fortunes. They



INTERIOR OF A WIGWAM, SHOWING CONSTRUCTION, 1607
From Smith's General History

generally adopted the style of habitation they found in use among the Indians, a house called a wigwam, sometimes referred to as tents, although they in no manner resembled what then or even

now are so called. It is true that the ship that brought over the adventurers did carry in its hold lumber properly cut for the erection of a fort, because the newcomers did not know what they would find for building material in the new world.

The fact that this timber was brought is an indication that there were persons among the colonists to erect the structure, although the workers who came in the first ship were not all of them useful, for only twelve of the party were set down as laborers, and of the artisans, we learn that they included jewelers, gold refiners and a perfumer.

All of the party did not even have wigwams at first, for we learn from Strachey that "by many occasions, ill lodging at the first (the poorer on the bare ground, and the best in such miserable cottages at best as through which the fervent piercing heat of the sun, which there (it is true) in the first cause, creating such sommer fevers amongst them, found never resistaunce), hard fare, and their owne judgments and saffeties instructing them to worke hard in the faint tyme of sommer (the better to be accommodated and fitted for the wynter), they have fallen sick, yet have they recovered agayne by the very small meanes."

William Strachey, who was Secretary and Recorder for the colony, and described conditions as he found them in 1618, or more than ten years after Smith and his band arrived, is next to Smith one of our best sources of information about the state of things in Virginia at its founding. He

gives us a word-picture of the average Indian wigwam, and, as it was the type of house the more fortunate of the colonists enjoyed, it may be repeated here. For the sake of convenience the narrator's seventeenth century orthography may be changed.

"As for their [the Indians'] houses," he relates, "who knoweth one of them knoweth them all, even the chief king's house itself, for they be all alike builded one to the other. They are like garden arbors, at best like our shepherds' cottages, made yet handsomely enough, though without strength or gayness, of such plants as they can pluck up, bow and make the green tops meet together, in fashion of a round roof, which they thatch with mats thrown over. The walls are made of barks of trees, but then those be principal houses, for so many barks which go in the making up of a house are long time of purchasing. In the midst of the house there is a lover [opening in the roof], out of which the smoke issueth, the fire being kept tight under. Every house commonly has two doors, one before and a postern. The doors be hung with mats, never locked nor bolted, but only those mats be to turn up, or let fall at pleasure; and their houses are so commonly placed under the covert of trees, that the violence of foul weather, snow, or rain, cannot assault them nor the sun in summer annoy them; and the roof being covered, as I say, the wind is easily kept out, insomuch as they are as warm as stoves, although very smoky. Windows they have none, but the light comes in at the door and at the

lover; for should they have broad and open windows in the quarters of their houses, they know not well how, upon any occasion, to make them close and let in the light, too, for glass they know not.

"Round about the house on both sides are their bedsteads, which are thick, short posts staked into the ground, a foot high and somewhat more and for the sides small poles are laid along with a hurdle of reeds cast over, wherein they roll down a fine white mat or two (as for a bed) when they go to sleep and the which they roll up again in the morning when they rise, as we do our pallets, and upon these, round about the house, they lie, heads and points, one by the other, especially making a fire before them in the midst of the house, as they do usually every night, and some one of them by agreement, maintains the fire all that night long.'"

A view of the interior of Powhattan's wigwam is given in Smith's General History of Virginia, which is reproduced here, shows the kind of abodes the first English settlers erected, or had erected for them.

Captain Nathaniel Butler, who was Governor of the Somers Islands, now Bermuda, paid the colony, which came under his jurisdiction, a visit in 1622, or fifteen years after the planting of Jamestown. As he had been accused of extortion, and other malpractices in office, he evidently displayed some malice in his description of the Virginians, but, even allowing for this state of his mind, he evidently did not hit wide of the mark.

Although Byrd states that the colonists built an inn at a cost of five hundred pounds, Butler could not find it in his time. He says: "The new people that are yearly sent over, which arrive here for the most part very unseasonably in winter, find neither guest house, inn, nor any the like place to shroud themselves in at their arrival; no, not so much as a stroke given towards any such charitable work, so that many of them, by want hereof, are not only seen dying under hedges, and in the woods, but being dead lie some of them for many days unregarded and unburied.

"Their houses are generally the worst that ever I saw, the meanest cottages in England being every way equal (if not superior) with the most of the best, and besides, so scatteringly are they seated one from another, as partly by distance, but especially by the interposition of creeks and swamps, as they call them, they offer all advantages to their savage enemies, and are utterly deprived of all sudden recollection of themselves upon any terms whatever."

Butler also declared that he saw no signs of any fortifications whatever, although it is said that lumber for erecting such a piece of construction was brought over in the first ship with the colonists. The log church which was built at Jamestown was the only place the Assembly could find in which to hold its sessions, and it was innocent of glass windows. Notwithstanding the first church erected in Virginia was built of logs, some valuable woods entered into its construction, and fitting. We are told that its "fair, broad win-

dows" had frames of cedar, and shutters to shut out inclement weather, the shutters also being of cedar. The communion table was made of black walnut. The pulpit was constructed of cedar, and the font is not otherwise described than as being "hewn hollow like a canoa" (canoe).

Even ten years after the first landing of the colonists in Jamestown, the settlement was little advanced toward permanency, and consequently, as has been shown, the housing accommodations were of the most primitive character. In a manuscript in the British Record Office, entitled "The Discourse of the Old Virginia Company," it is learned that as late as 1618 even the directors of the company in London had no other thought of the colony than to get as much money from tobacco and sassafras from Virginia as they could, realizing that none of the adventurers had any serious intention of making the New World his home.

Extraordinary means soon began to be used for the purpose of increasing the population of Virginia. Convicts, kidnapped boys and girls, and younger sons, whose families wanted to get rid of them, were sent to the new country. In 1619 negro slavery was introduced, when a Dutch man-of-war sold twenty African slaves to the planters.

With the increase of population there was more of an abundance of labor, and wigwams were being supplanted by log cabins, and finally about 1632 a church of brick was begun at Smithfield. This church, still standing, from all evidences is

older than the more romantic ruin at Jamestown. About thirty years ago it was restored to what is regarded as more or less its original appearance.

The walls were standing, but the windows, roof, and certain other woodwork was missing. This edifice, known as St. Luke's Church, was used continuously as a place of workship until 1836, when the congregation, having dwindled in numbers, abandoned it. After that relic hunters, and others set to work to make it a ruin, so that by 1887, when the Rev. Dr. David Burr, of Washington, visited the place he found nothing left but the walls. He started the work of restoration, and in this the woodwork was the principal material added to the original, and consequently differs in design, although in keeping with what was believed to have formerly been used for windows, doors, etc.

There seems to be the best of reasons to believe this church was erected in the year 1632. Certantly bricks found in it bear the date moulded in them, and the more or less primitive character of the architecture stamp it at once as of the earliest period of Colonial types. It will be noted that it bears a close resemblance to the average village church found in England in Elizabethan or Jacobian times. Many of these may still be found existing in England. It is merely necessary to mention Sulgrave Church, Northamptonshire; the church at Aston Cantlow, Warwickshire, and Oare Church, Somersetshire. The type is the simplest in design of early church architecture. There is the square Norman tower over the entrance, and the buttressed walls, and it is pos-

ST. LUKE'S CHURCH, SMITHFIELD, VA. BUILT 1632. RESTORED 1894.

sible that the tower originally was finished with the same sort of battlement as is found on the top of the postern wall of the church. This feature is frequently found in tower ornamentation in similar little Gothic churches in England, particularly in the minor edifices noted above.

The archaeological zeal of the restorers caused them to incorporate in the building a few thousand of the bricks taken from the ruins of the Jamestown church. While the edifice cannot be offered as a genuine example of the detail belonging to structures of its time, its general plan has not been disturbed. The Gothic windows now found in it probably are a little more true to style than were the original ones, but St. Luke's may be said to be the oldest standing church of English design in the United States. Smithfield lies in the County of Isle of Wight, Virginia, about ten miles from Fortress Monroe.

Virginia was one of the colonies which early built of brick, and no doubt the brick was made there at the time. In some South Carolina buildings, and in a few in Pennsylvania and New Jersey, there are structures in which bricks resembling in size the English ones of the period are found. The English brick is about a quarter inch or more larger than the American. It is probably from this circumstance that there has arisen the tradition that the material was imported from England. While this circumstance is most improbable it may be that the foundation for the legend will be explained in the suggestion that brick moulds were brought from the motherland.

That, it will be agreed, is quite another matter, and instead of being improbable is very likely to have happened, although there are no records existing so far as the writer has been able to learn, which state that either bricks or brick moulds were imported. There exist accounts for the building of the Church of St. Mary's, Burlington, New Jersey, but while they specify that brick was purchased, there are no records of payments for freight from England, or elsewhere. Yet some of these bricks are of the English size and pattern.

Some of the early habitations in the colony had thatched roofs, and were as simple in design as the copyhold tenements common in the England of Elizabeth and James. There were several types of these houses. The cottage, so-called, was the smallest type and the most primitive, being constructed of rough stone, plastered, and having a brick chimney. It was lighted by a single window. The copyhold house was a more advanced type. It had a chimney at one end, built outside the house, as was common in the smaller country dwellings. At that end of the structure the wall was of cut stone, and the chimney, which arose above it, was of brick, usually terminated, even in the most lowly instances, with a course or two to resemble a cornice. The copyhold house had at least two windows, and generally displayed a little more architectural adornment. The copyhold house had a red tile roof, instead of one made of thatch.

While it is known that thatched roofs were commonly used in the early days in Virginia, there

do not seem to be any records indicating that tiles were generally in use for roofing purposes. Log cabins were in use there, as they were in New England at a little later date, and these, of course, usually had thatched roofs.

It should be emphasized that Virginia, more than any other of the colonies outside of Pennsylvania, West Jersey, and the Delaware Valley, was partial to brick for building purposes, which indicate that this was a material comparatively easy of access. The church at Smithfield, and the one at Jamestown were constructed of brick. Both date from a period within a quarter century of the founding of the colony, and may be said to have been the first indications that there was any sense of permanency in the movement to colonize the province.

Aside from St. Luke's Church at Smithfield, the best example of early brick architecture existing in Virginia is probably the mansion house, Westover, the home of William Byrd. It is stated in some of the biographical sketches of William Byrd, who was the second of that name, that he was born at Westover. This, however, is a discrepancy, for the younger and better known of the name, was born in 1674, soon after his father, the first of the name, brought his young bride from England to take up the property left him by his uncle. He did not purchase Westover estate until 1688.

We find the first William Byrd sending to London in June, 1684, for four hundred feet of glass, with drawn lead and solder in proportion, which

WESTOVER, VIRGINIA

This view shows outbuildings at left. Built 1688-90. Restored 1749

indicates that he was then engaged in a building operation, but it scarcely could have been on Westover, which had not yet come into his possession. He, as was his son after him, was a highly educated man, and was generally regarded as perhaps the richest man in the province. Therefore when he began to build Westover, which lies outside Richmond, it is more than likely that he sent to London for a plan, and it is possible that some of the original woodwork was sent over to him from his native land.

Of the latter, however, nothing or little now remains, because the beautiful house was partly destroyed by fire in 1749, when it was rebuilt as closely as possible to its pristine appearance by the builder's son, the great William Byrd of Westover. While there does not appear to be any certain date for the building of the mansion, it is probable that it was erected between 1688 and 1690.

In connection with its plan, it is interesting to note that it follows the general design of Coleshill, Berkshire, England, which is attributed to Inigo Jones. Coleshill was erected in 1650. There are differences which are obvious between the two, but the general appearance of the façade suggests an adaptation, also on a smaller scale, of the older building. The great carved frontispiece over the main entrance of Westover may have been added in 1749 when the house was repaired after the fire, or it may, indeed, have been an original. The latter surmise, however, does not appear to be well founded, because it is unlike anything that dates

from 1690 in this country, while it very well may date from the time of the restoration, because that was a period when there was a larger interest taken in exterior ornamentation.

Westover has a slate roof, which is distinctively American, but the layout of the grounds follows the custom of the age, by having kitchens and outbuildings connected with the mansion by means of a colonnade. This design was comparatively novel in 1690, but it will be found to have been followed in many of the older Colonial homes, especially in the South and Middle Provinces. A familiar example is Washington's home at Mount Vernon, which, of course is of later date than the original Westover.

William Byrd, the second, enjoys the distinction of having been the first native Virginian writer, although none of his writings was published in his lifetime, nor, indeed until he had been dead for a century. That he was a firm believer in brick as a building material is indicated by some of his remarks about the North Carolinians, found in his manuscripts, and printed in 1866.

He visited North Carolina in 1728, and kept a journal of his trip. Of Edenton, the then capital of the Province, he wrote that it consisted of "forty or fifty houses, most of them small and built without expense. A citizen here is counted extravagant if he has ambition enough to aspire to a brick chimney. Justice herself is but indifferently lodged, and the courthouse having much the air of a common tobacco-house. I believe this is the only metropolis in the Christian or Moham-

ELIZABETHAN TENEMENTS
Drawn from Contemporary Surveys

medan worlds, where there is neither church, mosque, synagogue, or any other place of public worship, of any sect or religion whatsoever." Again he refers to the people in the neighboring province as irreligious and idle, saying "they pay not tribute, either to God or to Caesar."

North Carolina originally, as has been mentioned, was a part of the territory assigned to the London Virginia Company. Charles II, having a

very hazy idea of the geography of this section of the world, in 1663 gave the Carolinas to a few favorites, and thus started a boundary dispute which was not settled for fifty years. It is seen from the statements of Byrd, that even in 1728 it was very much of an infant colony, and from the same authority it may be inferred that it had nothing of interest to show by way of architecture before 1700.

CHAPTER III

IN NEW ENGLAND PRIOR TO 1700

NEW ENGLAND saw the first serious attempts at colonization in this country, and it follows therefore that in this section we shall find the earliest examples of the buildings erected by settlers in what is now the United States.

If any one thing may be said to be typical of Colonial structures in New England it is that the material used is generally, even principally, wood. Other Colonies, dating later, and being situated in more favoring neighborhoods, did have a fair proportion of wooden buildings, but it was mainly a temporary makeshift, and not a deliberate policy, as it was in New England.

Several reasons may be advanced for this characteristic of the New England structure. In the first place, the Puritans who came from England were familiar with frame structures, for it had been only a few years before they started out for the new land that brick was being generally intro-

duced for building the smaller types of dwellings in that country.

It is more than probable that the real reason for the adoption of wood for the first dwellings in New England, and even until more modern times, is traceable to the fact that lime was not easily obtained in that section of the country. Of course, there was plenty of sand, and we also know that the very first pilgrims to land noted with joy that a good quality of clay was to be obtained, which might have been used for the manufacture of brick. It happens that the Colonists did not think of brick but regarded it as a substitute for soap. It is also evident that there was a large supply of stone, but the absence of lime or the stone to make it, left the manufacture of mortar out of the question, and consequently all substantial construction had to be foregone.

It is now difficult to picture in the mind an England that is largely composed of wooden houses, and yet, in the days of Elizabeth and James, even London was principally occupied with wooden structures. To that fact may be laid a great deal of the blame for the enormous extent of the Great Fire of 1666.

Harrison, writing in 1587, states, "The greatest part of our buildings in the cities and good towns of England consisteth only of timber, for as yet few of the houses of the communalty (except here and there in the West-country) are made of stone, although they may be (in my opinion) in divers other places be builded so good cheap of the one as of the other."

JOHN WARD HOUSE, SALEM, MASS. BUILT 1684. *From Cousins & Riley's Salem*

The same old author goes on to describe the building methods then in vogue: "It is not vain, therefore," he writes, "in speaking of building, to make a distinction between the plain and woody soils; for as in these, our houses are commonly strong and well-timbered (so that in many places there are not above four, six, or nine inches between stud and stud), so in the open campaign countries they are forced, for want of stuff, to use no studs at all, but only frankposts, raisins, beams, prickposts, groundsels, summers (or dormants) transoms, and such principals, with here and there a girdling, whereunto they fasten their splints or raddles, and then cast it all over with thick clay to keep out the wind, which otherwise would annoy them.

"Certes this rude kind of building made the Spaniards in Queen Mary's days to wonder, but chiefly when they saw what large diet was used in many of these so homely cottages; insomuch that one of no small reputation amongst them said after this manner—'These English (quoth he) have their houses made of sticks and dirt, but they fare commonly so well as the king.' . . . In like sort as every country house is thus apparaled on the outside, so is it inwardly divided into sundry rooms above and beneath; and, where plenty of wood is, they cover them with tiles, otherwise with straw, sedge, or reed, except some quarry of slate be near at hand, from whence they have for their money much as may suffice them. The clay wherewith our houses are impaneled is either white, red, or blue; and of these the first

doth participate very much of the nature of our chalk; the second is called loam; but the third eftsoons changeth color as soon as it is wrought, notwithstanding that it looks blue when it is thrown out of the pit."

The same authority mentions that stoves are only coming into use in England, saying that heretofore they have not been used greatly, but now they are being introduced into "divers houses of the gentry and wealthy citizens, who builded them not to work and feed in, as in Germany and elsewhere, but now and then to sweat in, as occasion and need shall require it." In the same work mention is made of the fact that "Of old time, our country houses, instead of glass, did use much lattice, and that made either of wicker or fine rifts of oak in checkerwise . . . But as horn in windows is now quite laid down in every place, so our lattices are grown into less use, because glass is come to be so plentiful and within a very little so cheap, if not better than the other."

There still were to be found in England many houses of even the better class constructed of timber, for Harrison writes: "The ancient manors and houses of our gentlemen are yet and for the most part of strong timber, in framing whereof our carpenters have been and are worthily preferred before those of like science among other nations. Howbeit such has be lately builded are comonly either of brick or hard stone, or both, their rooms large and comely, and houses of office further distant from their lodgings. Those of the nobility are likewise wrought with brick and

SCROOBY MANOR HOUSES, ENGLAND
Showing original lean-to feature

hard stone, as provision may best be made, but so magnificent and stately as the basest house of a baron doth often match in our days with some honors of princes in old time."

There are, or were until a few years ago, a few examples of the kind of house the Pilgrims were familiar with in Scrooby, Nottinghamshire, England, and it seems that they did not radically differ from the kind of buildings described by William Harrison, in his contribution to Holinshead's Chronicles.

Here are not only timber buildings, but those whose chinks were filled with clay, and the general design of the cottages indicate the origin of the style of building that was found in New England, and may still be found there, for the materials have shown that brick and stone are not the only building materials that will last centuries.

In Scrooby may be found the long lean-to roof which persists in the more ancient buildings to be found in Massachusetts, and in Connecticut. There are also examples on Long Island, but they probably are not so ancient as those in New England.

Some good examples of the kind of houses familiar to the Pilgrims in other parts of England may be found in a group of old dwellings in Cambridge, England. These are partly brick and partly timber and stucco with shingle roofs. They indicate alterations from their original condition, especially the blank dormer at the side of one of the structures, which appears to have been a modern change. The houses generally give a

good idea of the better class of tenement in the days of Elizabeth and feature the overhanging second story.

The impress which the age of Elizabeth had left upon England, had not entirely been obliterated in 1620, when the Pilgrims sailed from Plymouth to find an asylum in the new world. Such progressive ideas as the Puritans had were not artistic in their nature; it was not cultural desires that led them away, but their exodus may be set down as a dash for religious freedom for their own beliefs—they were not so considerate for the freedom of the religious beliefs of others.

Relentless in their attitude, they were perverse, domineering and lacking in judgment, because they refused to listen to the advice of Captain John Smith, who cautioned them of conditions in the new world, and offered to pilot them. It is only a twice-told story that the first of the band floundered around for a month in Plymouth Bay before they finally decided upon a place of settlement. The hardships the band suffered was only to be expected of a party that knew little or nothing of the country they expected to make their home. And then, too, they arrived at the beginning of the winter season, in a land that was far more inclement at that time of year than the country from which they came. With a situation like this confronting them they were far more concerned with any sufficient shelter than they were with the erection of comfortable dwellings.

It is true that at the time the Pilgrims landed

and made their surveys of the country the woods and fields were still bathed in the Autumn sunshine, but they kept on shipboard for some time while the search for a suitable settlement was carried on.

We learn from Captain William Bradford that they found a variety of woods—oak, pine, walnut, beech, ash, birch, hazel, holly aspen, sassafras, all in abundance, as well as fruit trees. "Here are," continues Bradford in his account, "sand and gravel; and excellent clay, no better in the world, excellent for pots, and will wash like soap; and great store of stone, though somewhat soft; and the best water that ever we drank."

The first structure they erected was what they called a platform or fort, upon which to place their small pieces of ordnance. They complained that they had to go a distance of about 650 feet to fetch the wood needed for the fortification. The fortification having been completed about twenty of the party decided to settle and build houses. A party that remained on shore was caught in a great rain before they had time to erect a guard house at the fort.

The next few weeks were spent in felling trees, which were cut up in logs for building. The fortification was protected by a paling, and two rows of dwellings were erected within the enclosure, forming a street, which remains until today, now being called Leyden street. Each plot had a garden and around the whole was a paling as a protection from Indians and wild beasts, the principal beast being the wolf. The first houses built

REBECCA NURSE HOME, TAPLEYVILLE, MASS.
Built 1636, showing example of lean-to—From Cousins & Riley's Salem

in this manner were constructed of timber—probably split logs, the chinks filled with clay, and the roofs of thatch, such as the Pilgrims had been accustomed to find in their native land. In fact, we read that on January 3, 1621, or shortly after the settlers landed, some of the party were told off to gather materials for thatching the roofs of their dwellings. These primitive houses were of the simplest design, as might be imagined, and the windows were first filled with oiled linen in lieu of glass.

Mechanics were scarce in the colony for many years, for we find Governor Winthrop writing of conditions in 1633: "The scarcity of workmen has caused them to raise their wages to an excessive rate, so as a carpenter would have three shillings a day, a laborer two shillings and sixpence, etc.; and accordingly those who had commodities to sell advanced their prices sometimes double to that they cost in England, so as it grew to a general complaint, which the court taking knowledge of, as also of some further evils, which were springing out of the excessive rates of wages, they made an order, that carpenters, masons, etc., should take but two shillings the day, and laborers but eighteenpence, and that no commodity should be sold at above four pence in the shilling more than it cost for ready money in England; oil, wine, etc., and cheese, in regard of the hazard of bringing, etc., excepted."

We learn that when Governor Endicott arrived in 1628, he brought with him a party of housewrights, and these probably were the first group

of distinctly capable tradesmen to arrive in the Colony. Certainly it was the first large group of skilled labor with which to carry on the building operations designed for certain parts of the settlement. But from what Governor Winthrop wrote five years later, there was still a large demand for this kind of labor in the Colony.

It is an interesting subject for study, the characteristic architecture of the several larger divisions of the original Colonies. After viewing them one is scarce able to square them with the fact that all of these Colonists came from the same motherland—England. There are several exceptions to this generalization. In New York, the first settlers were Dutch; in Pennsylvania they were Dutch, too, but it was the Swedes that made the first impression upon that part of the country, the English coming later, and in what is now Louisiana, and the eastern section of Canada, were, of course, French. But the South, the Middle Colonies and New England were virtually English in their ideas as they were in their laws. Neither the Dutch in New York nor the Swedes in Pennsylvania gave to our architecture much that is really typical. The French Colonists did keep to type, a type that, so far as we are concerned, may be said to be exotic, and such characteristics as it may have, never were incorporated into the Anglo-American Colonial architecture. It should be mentioned that the Dutch in New York did seem to influence a Colonial architecture which might be said to have been neither Dutch nor English, but a new American style.

Some objection has been raised, mainly by Fiske Kimball, of the University of Virginia, whom the writer is pleased to recognize as an authority on the subject, to the statement made in an earlier chapter that log houses were erected by some of the earliest of the English Colonists. As a matter of fact, the suggestion made here was derived from the frequent statements to be found in the early writers of New England, where it was stated that the first settlers at Plymouth went out to cut logs with which to erect shelters.

We have, from the same authority, statements about the erection of platforms upon which to place their ordnance, and that around this they erected houses. We also know that labor of the skilled kind was particularly rare at that time, and the inference is plainly that the settlers erected the simplest type of dwelling that could be built by such means as they had.

It is, of course, known that when they got settled that they built much the same as they had been accustomed to in their native land. That is, timber houses, in which the frames were of hewn logs, the sides of clove-board (clap-board), and the roofs of thatch. We even have authority for the statement that at the time they built their chimneys of timbers. These may have been split logs, as the writer imagines, or they may have been of hewn and trimmed logs, as no doubt they were in some instances. The whole was then lined with clay.

These wooden chimneys caused alarm in time,

and we have the statement that in 1631, when the town of Salem was about to be built, Governor Dudley wrote an order on this subject. The order, here quoted from Cousins and Riley's "Colonial Architecture of Salem," runs:

"For the prevention wherof in our new towne, intended this somer to bee builded, wee haue ordered that noe man there shall build his chimney with wood, nor cover his house with thatch, which was readily assented unto, for that diverse other howses haue beene burned since our arrivall (the fire allwaies begininge in the wooden chimneys) and some wigwams, which haue taken fire in the roofs covered with thatch or boughs."

The word "wigwams" in the above statement seems to picture to the mind a very primitive type of dwelling, and could not mean the Indian style of house, because the latter had no chimneys, althought it was covered with thatch or boughs.

Lack of lime or the stone from which to derive it, as has already been mentioned, caused the elimination of everything in the building line that required mortar. Thus, the first dwellings, and even those for a century after the settlement, in New England, had no plaster on their walls. They did have a composition of clay and cut straw, applied to the lathing, and this did duty for plaster. Similar compositions were used on the chimneys, even after they were constructed of rough field stone.

At first the New Englanders used oak almost exclusively for the frames and walls of their buildings, but this practice did not last a great many years, and pine was substituted for walls, in

OLD FAIRBANK'S MANSION, DEDHAM, MASS.
Built 1636—From "White Pine in Home Building"

the form of clapboards, and cedar was used for the shingles, which replaced all thatch roofs by 1665. One of the earliest New England buildings that remained down to our time, had walls of shingle. This was the Barker House at Pembroke, Massachusetts, which is said to have been erected in 1628. It finally fell down in 1894, not, it was said, through any failure of the material to hold together, but as the victim of relic hunters who pulled it to pieces.

New England then may be said to be the home of the frame house in America(and in that section of the country will be found the only important examples of the lean-to roof and the sole specimens of the overhanging second story types of domestic architecture to be encountered in the United States. While gables and gambrel roofs may be seen in many parts of Massachusetts, they are not unknown in other sections of the country where Colonial examples are still existing. However, the many gabled houses are distinctively a New England type, and the jut-by is another rarity in dwelling architecture which is unknown outside of the territory known as New England.

Many of these styles were the result of successive alterations or additions to original structures, and were not deliberately planned. This, of course, is not true of the overhanging second-story feature, which was imported from England, and was intended to do duty as a shelter for the first floor. In Pennsylvania the problem was attacked in another and equally typical manner.

At Dedham, Massachusetts, still stands the

Fairbanks House, which was built in 1636, and, consequently the oldest dwelling house existing in the United States, that is, of English origin. This is an example of the clapboard structure, and is also another interesting specimen of the longevity of the woods used in these early structures. There is no sign of paint upon the exterior, and yet the old boards, which are of the crudest manufacture, being in fact real "clove-boards," are in good condition.

In New England of the present time, one is delighted by the sight of so many well-preserved and carefully painted houses, but it is not generally recognized that the early settlers did not paint the exteriors of their houses, and, on account of the scarcity of lime, of course, did not cover them with white-wash, as was done further south. The Fairbanks House is built of white pine, and as a consequence has been one of the chief exhibits of the White Pine Bureau, which is established to increase the sale of that wood.

During the period with which this chapter is concerned, building mainly was confined to houses in which the settlers dwelt, and to outbuildings, in which they kept their implements of agriculture. Around each house usually was a large plot of ground, in which flourished fruit trees, and on part of which a kitchen garden was maintained, for it should be remembered that the present day cities in New England, such of them as were started at all, were the merest towns, or settlements. It was not a period when architecture of an artistic nature was even considered, least of

all by the type of men who settled New England, who were Puritans in all that word implies. They were severe not only in their rules of conduct, but in their tastes, and it will be understood that in such a field there was no room for art to flourish, to say nothing of existing.

Viewed in the Twentieth Century such examples of the age as remain interest us only because of their quaint character, for it is not convenient, comfortable, nor artistic, although viewed in its natural setting, with the ancient trees surrounding the old houses there is something inviting about it all to the traveler: There also are suggestions for the architect and many of the rude bits of architecture, the work of a Seventeenth Century carpenter without any artistic training, but skilled in the use of his tools, and a knowledge of construction, are being adapted to modern uses very successfully.

CHAPTER IV

IN NEW YORK BEFORE 1700

WHILE the Southern colonies usually erected a church, in New England we find the communities built a meeting house as soon as the population was of sufficient size. The New England Meeting House differed, not only in architecture from the ecclesiastical edifices erected in the other Colonies, but in the use of materials. Thus, in Dedham and Medfield, Massachusetts, for instance, which were typical of other small towns in the first half of the Seventeenth century, meeting houses of frame were erected. We have the size of the meeting house of the former place, and we have the price of that which was erected in Medfield.

The first meeting house in Medfield was erected about the year 1653, and is supposed to have been based upon the dimensions of that in Dedham. The latter was thirty-six feet long, twenty feet wide, and twelve feet high to its thatched roof. It cost forty pounds. The meeting house

was all that its name implied. It was virtually the church on Sundays, and the place of every popular assemblage, including the fountain of all home legislation on other days of the week. It will be recalled that the New England Town Meeting was one of the earliest methods of local government we had in this country, and it is regarded as the basis of many of our democratic governmental ideas.

Naturally, such a structure was of the plainest style of architecture, but it seems that these meeting houses did boast of board flooring, which was something the earliest churches erected in the Colonies did not have. There is to be found in the town records for 1675 an entry to the effect that the walls of the Meeting House were shingled, and we also learn from the same authority that gates were made for it.

Like the dwellings in New England of this period there were additions made from time to time to the original structure, thus, in 1665 we find that 16 shillings a thousand were being paid John Pratt and Robert Mason to shingle the new end of the meeting house. At this time, however, glass was used in the building, for there is an entry of one pound, fifteen shillings being paid for that material.

Reference to "a gallery with two seats on the side of the meeting house from one end gallery to the other," which is found in the records under the year 1659, might give an impression of a much larger structure than really was the case. It has been suggested with good reason, that these

galleries were merely raised platforms above the level of the floor, because in a structure only twelve feet high, the modern idea of a gallery would be an incongruity.

In Hingham, Massachusetts, there still stands a large, square-planned, two-and-a-half-story frame building, known as "Old Ship" church, and, more correctly, the Old Hingham Meeting House, said to have been erected in 1681. It is surmounted by a gallery and cupola and, if all of it as we see it today is the original structure, which seems to be doubtful, it may be said to have been one of the most ambitious structures erected in the Colonies up to that time. The walls rest upon a foundation of stone, and the square design of the whole building, is carried out even to the roof, which is four-sided. As this building also is built of white pine, it is another happy illustration of the longevity of that wood.

There is a close connection in the early history of both Connecticut and New York. It is perfectly true that the latter was settled at least ten years before the former and it is equally true that the present site of New York City was visited long before the first ship full of Pilgrims landed in New England.

Both the Plymouth Company and the Dutch West India Company claimed parts of the same territory, and it is a fact that Long Island was agreeably portioned out between the two until the English captured the New Netherlands and all of the Colonies became English.

NEW AMSTERDAM, SHOWING FORT AND CHURCH, ABOUT 1650
From the Beechrijvingh van Amerika, of Arnoldus Montanus, 1671

So far as is known the first buildings erected in what is now Connecticut were mere log structures built for the fur trade. The Dutch built the first one at what now is Hartford, and had even erected a fortification there. This circumstance did not prevent the Plymouth men from Massachusetts from boldly entering the domain and engaging in the fur trade which they also found profitable.

The first English settlement in Connecticut was planted at Windsor, on the Connecticut River in 1633, and no doubt, since it followed the Dutch occupation, had been partly inspired by the success of the Dutch traders there. A stronger reason was the desire to set up an independent state.

According to Governor Bradford's account, the first house erected in Connecticut was what is now being advertised as "ready-cut." In other words, the material for erecting the building was cut to size, and then carried up the Connecticut River to the place of settlement, where it was assembled.

From the Governor's *History of the Plimouth Plantation,* we are informed how both the Massachusetts or Plymouth men, and the Dutch made a rush for the possession of the territory. In his quaint way, he relates:

"But ye Dutch (begane now to repente) and hearing of their purpose & preparation indeoured to preuent them; and gott in a litle before them, and made a slight forte, and planted 2 peeces of ordnance, thretening to stopp their passage. But they haueing made a smale frame of a house ready, and haueing a great new-barke they stowed their

frame in her hold, & bords to couer & finishe it, hauing nayles, & all other prouisions fitting for their use * * * When they came up the river, the dutch demanded what they intended, and whiter they would goe, they answered up the river to trade. * * * So they passed along, and though the dutch threatened them hard, yet they shoot not, coming to their place, they clapt up their house quickly and landed their prouissions, and left ye companie appoynted, and sent the barke home, and afterwards palisadoed their house aboute, and fortified them selues better."

In the Eastern part of Long Island, which originally was settled by the Connecticut men, there still exist some early examples of English architecture such as is found in New England. As might be imagined in style or structure they do not differ greatly from what is to be found in Massachusetts. The lean-to roofs, and the primitive shingle walls are characteristic features, but they, of course, are no more typical of Connecticut than they are of the rest of earliest New England.

One of the best known of these examples is the John Howard Payne house, so-called, at Easthampton. The poet and playwright was not born in this house, as is sometimes believed, but there does not appear to be any reason to doubt the statement that he lived in it as a child. This style of house was continued in that locality for a century later than the Payne home, which is believed to date from about 1660, or at a period when that part of Long Island was still governed by Connecticut.

JOHN HOWARD PAYNE HOUSE, EASTHAMPTON, L. I. BUILT 1660

As early as 1613 there was a trading post at the lower end of Manhattan Island, and this may be said to have been the beginning of the Metropolis. Next to nothing definite is known of the character of this post, but it has been assumed by other writers that the traders, who were Dutch, built themselves huts, and probably stockaded themselves as a protection against hostile natives.

Even Dutch authority has admitted that the Dutch were squatters, and that the West India Company had no right to what it was pleased to call the New Netherlands. Certainly the first parties to arrive and settle in New Amsterdam were no more real settlers or colonists than were those adventurers who a few years before founded Jamestown. So far as can be learned the party consisted only of men, many of them employees of the Dutch West India Company, who were sent out to gather in valuable furs. There was no intention of viewing America in any other light than as a vast treasure trove, which was to be worked for all it was worth. They had no intention of giving anything to America, but came for the purpose of making money for the stockholders.

Indeed, the company was not really established until 1621, when it received a charter that virtually gave to it the whole world to do business in, regardless of whose world it was. The earliest traders had been doing business more or less on their own account, or rather on a commission basis with the Netherlands Government, and they had even less regard for the new country than had the company when it was established by law.

With conditions such as these one could not expect to find anything of value in the architecture of the buildings erected for the use of the small parties that settled in New Amsterdam.

That part of the company which was not intimately concerned with gathering furs in the neighborhood of New Amsterdam, was virtually plying the trade of buccanneers, in levying on the rich Spanish ships that passed to and fro between Europe and Spain's golden empire in America. Of course, the Netherlands Government managed to take the lion's share of this enterprise.

It was not until 1623 that the first Dutch Colonists began to appear in this part of the world. In that year a vessel of 130 tons, named the New Netherland, with thirty families, mostly Walloons, on board were brought over to settle the country. A part of this living cargo was landed in New Amsterdam, and the remainder on the South or Delaware River. These Walloons were the kind of stuff that colonists are made, for they, like the Pilgrims of Plymouth, were fleeing from the religious intolerance of Europe, and intended to make the new country their future home.

From the evidence of the earliest known view of New Amsterdam, it would appear that the most magnificent structure to be found there in 1630, or seven years after the first real colonists arrived, was a fort, which was laid out according to the plan which found so much favor in Europe in the period just after the Middle Ages. It was

no mere stockade, but an engineering work, and seems to have been more powerful than was required in a land where the savages were neither numerous nor supplied with ordnance. But the Dutch built strongly as they did everything else completely, and the fortification undoubtedly was designed with a view to visits of hostile fleets which might attempt to oust them.

High peaked roofs were characteristic of the buildings erected in New Amsterdam. At first the structures were of wood, but as the buildings were greater in height than those erected anywhere else in the Colonies until after the Revolution, stone and brick became the favored building materials.

Contemporary evidence of the character of the early buildings in New York is if anything more abundant than it is about many of the other early settlements. Those writers who mentioned the subject at all, appear to have been impressed by the fact that frame structures were not in the majority, as was the case in New England, where virtually every building for a hundred years after the first settlement was constructed of wood.

Buildings of four and five stories in height were no novelty in the cities of Holland, and structures of brick and stone were universal there, consequently when the Dutch began to build in New Amsterdam, naturally, excepting for temporary structures or those of small importance, they used similar materials. They also brought here another style of construction. Where the New England houses had their front doors planted in the

long side of the house, the Dutch used their gable ends for their entrances, and presented that end of the building to the street. A group of their houses, therefore, presented a view that was novel not only here but to such as had lived in England, whose building construction methods were closely followed by colonists elsewhere in the country.

In order to foster colonization, the West India Company had its charter altered to permit a grant

ANCIENT FERRY HOUSE, NEW YORK, IN 1832
From Watson's *Historic Tales of New York*

of territory to any one who would bring over fifty colonists and arrange their settlement in New Netherland. The directors of the company appear to have absorbed the privilege, and immediately established the Patroon system, a relic of feudal days, in the new country. These landlords built frame houses for their tenants, and rough stone houses for their overseers, or agents, neither

being of especial significance architecturally.

One of the earliest travelers to leave an account of the state of New Netherland in its early days, was the Jesuit Father, Isaac Jogues, a French missionary, who in 1642-43 found his way into the New Netherland in escaping from hostile Indians. Of the fort that had been erected at what is now New York City, he said, "It has four regular bastions mounted with several pieces of artillery. All of these bastions and all of the curtains were in 1643 but ramparts of earth, most of which had crumbled away, so that the fort could be entered on all sides." But he added that, "They were beginning to face the gates and bastions with stone. Within this fort stood a pretty large church built of stone; the house of the Governor, whom they call the Director General, quite neatly built of brick, the store houses and barracks."

"The first comers," according to the same authority, "found lands fit for use, formerly cleared by the savages who previously had fields here. Those who came later have cleared in the woods, which are mostly of oak. * * * There are some houses built of stone; they make lime of oyster shells, great heaps of which are found here made formerly by the savages who subsisted in part by this fishery."

Father Jogues found the settlement up the River, then called Renselaerswick, the colony of Renselaer, a rich Amsterdam merchant, one of the Patroons, dominated by a wretched log fort. About a hundred persons dwelt in this domain,

which contained between twenty-five and thirty houses. "All their houses," he adds, "are merely of boards and thatched. As yet there is no mason work, except in the chimneys. The forests furnishing many large pines, they make boards by means of their mills which they have for the purpose."

Being a thrifty, careful, orderly people, the Dutch, when they attempted to speed colonization, took means which today would be regarded as modern. No other colonizing agency of the time issued such detailed and instructive material as did the West India Company. Other parts of the country published tracts, the West India Company published information that was direct, and helpful.

For instance, a part of the pamphlet issued under the name of Cornelius Van Tienhoven, Secretary of the Province, in 1650, entitled "Information Relative to Taking up Land in New Netherland, in the Form of Colonies or Private Boweries," devotes one section to buildings. This is headed: "Of the building of houses at first." Here are a few quotations from it:

"Before beginning to build, it will above all things be necessary to select a well located spot, either on some river or bay, suitable for the settlement of a village or hamlet. * * * This hamlet can be fenced all around with high palisades or long boards and closed with gates, which is advantageous in case of attack by the natives who heretofore used to exhibit their insolence in new plantations.

"Those in New Netherland and especially in New England, who have no means to build farm houses at first according to their wishes, dig a square pit in the ground, cellar fashion, 6 or 7 feet deep, as long and as broad as they think proper, case the earth inside with wood all around the wall, and line the wood with bark of trees or something else to prevent the caving in of the earth.

"Floor this cellar with plank and wainscot it overhead for a ceiling, raise a roof of spars clear up and cover the spars with bark or green sods, so that they can live dry and warm in these houses with their entire families for two, three and four years, it being understood that partitions are run through those cellars which are adapted to the size of the family.

"The wealthy and principal men in New England, in the beginning of the Colonies, commenced their first dwelling houses in this fashion for two reasons; firstly, in order not to waste building and not to want food for next season; secondly, in order not to discourage poorer laboring people whom they brought over in numbers from Fatherland. In the course of three or four years when the country became adapted to agriculture, they built themselves handsome houses, spending on them several thousands.

"After the houses are built in the above described manner or otherwise, according to each person's means and fancy, gardens are made, and planted in season with all sorts of pot herbs, principally parsnips, carrots and cabbage, which bring

great plenty into the husbandman's dwelling."

In 1642 a city tavern was erected in New Amsterdam, but it was more than an inn as its name might suggest; it was a town hall or City Hall, and indeed, it was generally known as the Stadt Huys. This structure, according to various representations of it, was erected more in keeping with the English manner, having its entrance on what we call the façade, instead of in the gable

STADT HUYS, NEW YORK, BUILT 1642, REMOVED 1700
From Watson's *Historic Tales of New York*

walls. One picture of it shows it as a four and a half story building, while another view gives it as a three and a half story structure, the roof beginning really over the second story, and the remaining stories lighted by dormers. As the structure was removed about the year 1700 one must take any picture of it with reservations, although it is probable that it was three and a half stories in height.

As early as 1647 the Director General and the Councillors of New Netherland made an effort to correct the indiscriminate building of offensive structures, and for the purpose appointed a surveyor of buildings. This office probably would nowadays be called a Building Inspector, and this official issued permission to build according to rules adopted.

The following year the Government directed its attention to the wooden chimneys, and voted for their abolition. The Rule ran: "Whereas, the danger of fire is greater as the number of houses increase here, in New Amsterdam; and Whereas the greater number of them are built of Wood and covered with Reeds, together with the fact that some houses have Wooden Chimnies, which are very dangerous, * * * they therefore interdict that from this time forth, no wooden or Platted chimnies shall be permitted to be built."

By the year 1658, the Government discovered that many persons were holding desirable lands without improving them, thereby avoiding taxes while they waited for a raise in values, therefore it was ordained that these must either build on their lands or pay a stated tax. Whether this law had the result of increasing building operations is not known.

Many laws were passed describing the kinds of structures that were not allowed, but examination shows that all of these were influenced by an effort to protect the settlement from a dangerous fire. While stone chimneys were erected on the early houses built further up the Hudson River,

it seems that it was a generation before the last of the wooden chimneys were banished from the city.

Excepting for the earliest of the structures erected in New Amsterdam, the buildings by the middle of the Seventeenth century had roofs of tile. There were some of flag, which was condemned along with wooden chimneys. Writing in 1832 John F. Watson said that there then were standing in New York City only four or five houses of Dutch construction, and he gives a picture of several of these in the neighborhood of Broad and Garden Streets, one of them the ancient Ferry House. This picture is one of the few that bears some evidence of authority.

CHAPTER V

IN PENNSYLVANIA BEFORE 1700

SUCH impression as the earliest Dutch settlements left upon the Delaware River was completely obliterated by the Swedish colonists who succeeded them. At no time were the Dutch very numerous, because before they had had an opportunity to establish themselves, the first settlers were destroyed by the Indians, and those who later made attempts to colonize found themselves in dispute with the Swedes, who were the first real settlers along the Delaware River. As during the Dutch domination of that part of the country it was merely regarded as a part of the New Netherlands, it may be assumed that such structures as were erected by the Dutch, and so far as we have any records they did not extend much beyond the fortifications at several points, all of them of wood, were similar to those erected in Manhattan or along the Hudson River.

Nothing of Swedish architecture survives to this time, excepting two churches—the old Church in Wecacoe, Philadelphia, which was erected be-

tween 1698 and 1700, and consequently long after the establishment of the English rule there, and the Swede's Church in Wilmington, Delaware, which was erected prior to the one in Philadelphia, and by the same builders, although the two structures differ in detail and even in the materials used. It has been claimed that they followed the design of church buildings in Sweden.

We have evidence of the strongest character to substantiate the statement that the first Swedes along the Delaware built themselves log houses. This was very natural, for they had come from a land where log construction was a recognized building feature, and where even churches were so built, although even the Swedes when they arrived found it convenient to adopt the ready form of the Indian wigwam, until they could cut trees and build more substantial structures for themselves. There is still to be found at Naaman's Creek, in Delaware, a Swedish blockhouse which is supposed to have been built in 1654, which is not of timber construction.

At what is now Gloucester, N. J., the Dutch West India Company erected a trading post in 1623. The post was evidently nothing more than a fortification within which were erected rude buildings, the nature of which we now have no satisfactory evidence, but evidently they were constructed of logs.

This settlement is said to have consisted of a part of the Walloons who came over to the New

Netherlands in the party of thirty families, already mentioned.

It was not until 1631 that the west side of the Delaware was settled by the Dutch. In that year several of the patroons took land on both sides of the stream, and attempted to found the settlement of Swaaendael, which has been assigned to a site near the present city of Lewes, Delaware. From all appearances, this was the first ambitious attempt at colonization on the South or Delaware River, but quarrels with the Indians resulted in that settlement as well as Fort Nassau being destroyed by the sayages, and thus ending for a period any activity in the Delaware Valley.

These facts will account for the absence of anything like Dutch architecture or construction of the period in this section of the country.

A more determined effort to colonize the shores of the Delaware River was made by the Swedes, the first shipload of whose colonists arrived in 1638, having been sent out by the South Company of Sweden, which had been organized in 1624 for the purpose of trading with the distant parts of the world, and especially with America.

This expedition, which was led by two former associates of the Dutch West India Company, the patroon, Samuel Bloomaert, and Peter Minuit, a Walloon, who had been Governor of New Amsterdam. They established a trading post, and built a settlement, at what is now Wilmington, Delaware, and called the place Fort Christina, which appears to have been the first regularly laid out settlement along the Delaware.

EARLY PHILADELPHIA BALCONIED HOUSE
Loxley Hall, from a photo, 1859

Andreas Hudde, a commissioner sent out by Governor Kieft, of New Netherlands, to report upon the Swedish colonization along the shores of the South, or Delaware River, has given us a picture of the conditions existing there in 1645. From his report it would appear that the Swedes had constructed a number of forts and storage magazines, a mill and a blockhouse. The latter was used to good effect in taking possession of a part of the territory which now lies in a part of Philadelphia.

From all appearances the Swedes introduced the Blockhouse style of rudimentary architecture in America. Virtually all of their early construction was composed of logs, but these were replaced by masonry, and it may even be that Governor Printz's "mansion" on Tinicum Island, which seems to have been the principal object to attract the eyes of travelers to the neighborhood, was built of timber. While we have no data upon the subject which would permit of describing its dimensions, some idea of its character might be obtained from the remarks upon another house which he built in front of the Dutch fort on the Schuylkill called Fort Beversrede. This building was begun in September, 1648, and Alex Boyer, complaining of it in a letter to Stuyvesant said it was about thirty or thirty-five feet long by twenty broad. There appears to be reason to believe that this was what in these days would be called a "Spite House," as it did no other duty than stand within range of the guns of the Dutch Fort, much to the commander's chagrin. One

might be pardoned for suggesting that the Governor's House must have been of much greater size, since it was always alluded to as a "mansion," and probably was larger than the house just mentioned.

Thomas Campanius Holm, in his description of New Sweden, refers to Tinicum in this way: "Governor Printz resided in this fort, and gave it the name of New Gottenburg. He also caused to be built there a mansion for himself and his family, which was very handsome: there was likewise a fine orchard, a pleasure house, and other conveniences. He called it Printz Hall. On this island the principal inhabitants had their dwellings and plantations."

In 1646 the Swedes erected a church at Fort Christina (Wilmington), and it is known that it was built of logs. Of Manayunk, or Schuylkill, Holm says: "This was a handsome little fort built of logs, filled up with sand and stones, and surrounded with palisades cut sharp at the top. It was at the distance of four German miles east of Christina. It was mounted with great guns, as well as the other forts. Those forts are all situated on the water side."

Of Kinsessing, now in Philadelphia, on the west bank of the Schuylkill River, he wrote: "Chinessing was called the New Fort. It was not properly a fort, but substantial log houses, built of good, strong hard hickory, two stories high, which was sufficient to secure the people from Indians." At a place Holm alludes at as Karakung, "otherwise the Water Mill Stream, very convenient for water

PUSEY HOUSE, UPLAND, PA., BUILT 1683
Oldest House in Pennsylvania

mills: the Governor caused one to be erected there. It was a fine mill, which ground both fine and coarse flour, and was going early and late; it was the first seen in that country. There was no fort near it, but only a strong dwelling house, built of hickory, and inhabitated by freemen."

Of a place called Finland, Holm says, "This place was inhabited by Finns, who had strong houses, but no fort. It lies at the distance of two German miles, east of Christina, by water, and by land, it is distant two long Swedish miles."

In 1656 Jacobus Crabbe petitioned the Director General of New Netherland regarding a plantation, identified with New Amstel, where "brick and stone are made and baked." Which would indicate that brick was made in the early days along the Delaware, even before the English had arrived there to settle. Just what is meant by the term "made" can only be conjectured as to stone. It probably meant that stone was quarried and cut. When Crabbe began operations, also is a subject upon which there is no available information.

Professor Kalm, the Swedish traveler, who visited Philadelphia in 1748, has given us the only contemporary account of the character of the Swedish log houses, having on that occasion seen the last of the cabins, which then were in sad state of decay.

This had been the home of Sven Saener, whose name has been corrupted into Swanson, and Kalm wrote of it: "The wretched old wooden building (on a hill a little north of the Swedes Church)

belonging to one of the sons of Sven, is still preserved as a memorial of the once poor state of that place. Its antiquity gives it a superiority over all the other buildings in the town, although in itself the worst of all. But with these advantages it is ready to fall down, and in a few years to come it will be as difficult to find the place where it stood, as it was unlikely, when built, that it should in a short time become the place of one of the greatest towns in America."

Watson, the Philadelphia annalist, says that the original log houses of the Svens were standing until the British occupied Philadelphia during the Revolution (1777-78),when they were taken down and converted into fuel.

When Pastorius, the founder of Germantown, arrived in 1683, he said that Philadelphia consisted of three or four little cottages, such as Edward Drinker's, Sven Saener's, and that all of the residue being only woods, underwoods, timber and trees among which he several times lost himself in traveling from his cave by the waterside, to the hut of a Dutch baker, named Bom, who made their bread.

Referring to this cave, the dwelling of Pastorius, it is interesting to note that under date of 17th, 9th month, 1685, the Provincial Executive Council ordered that all families living in caves should appear before the council. It seems that no one obeyed the order, so another order went forth that the Governor's orders relating to caves, would be put into execution in one month's time. This was to the effect that all such dwellings should

be pulled down or demolished, because it was intended to open Front Street where these primitive houses were located.

According to Watson, these caves were generally formed by digging into the ground near the verge of the river bank, to a depth of about three feet, thus making the chamber partly underground, the remaining part was formed of sods of earth, or earth and brush combined. The roofs were formed of layers of limbs, or split pieces of trees, overlaid with sod or bark, river-rushes, etc. The chimneys were of stones, river pebbles, mortared together with clay and grass, or river-reeds.

While some of the earliest inhabitants lived in caves such as those described until their dwellings were erected, this state of things was only of a temporary nature. Some of the best people who came over to settle in Philadelphia took an active hand in the construction of their future homes. Thus we learn from Watson, that Deborah Morris, one of the early dwellers in Philadelphia, related how "her good aunt Hard willingly volunteered to help her husband at one end of the saw, and to fetch all such water to make mortar, as was then needful to build their chimney." The wife of another settler, Carter by name, whose dwelling was at the southeast corner of Fourth and Chestnut Streets, carried mortar for her husband while he helped to build their house.

According to William Penn's "Further Account of Pennsylvania, published in 1685, there were at that time "most sorts of useful tradesmen," in Philadelphia, "as carpenters, joiners, bricklayers,

masons, plasterers, plumbers, smiths, glaziers," among the building trades.

First among all of the cities in the Colonies, Philadelphia was quickly placed on a brick house basis, and the cave dwellers were not encouraged, as has been shown. The city had been laid out with precision, and had been arranged for certain kinds of construction. While wooden buildings were not prohibited, it appears that they were comparatively few in number, although Budd's Row, which was erected in Front Street near Dock just before Penn's arrival, were of frame.

There appeared to be a perfect mania for brick building, because the lesson of the Great Fire of London was still fresh in the minds of the colonists. Another thing that made for a superior kind of construction, and consequently of architecture, was the fact that the settlers who came over in shiploads, were not adventurers in the usual sense of the word, but usually persons in comfortable, or even good circumstances, who believed in the ability of Penn to establish a Colony that would be progressive and tolerant of the religious beliefs of all who settled in his province, and an underlying belief that purchases of land in Pennsylvania would quickly increase in value, which they really did.

Those who came to Pennsylvania, especially those who settled in Philadelphia, intended to become fixtures, and as they had no doubts for the future, they built of material which would defy generations of use.

"SLATE ROOF HOUSE," PHILADELPHIA. FROM A PICTURE OF 1832
This was the first H-type house in Pennsylvania

That is why we find an early Philadelphia type of architecture as applied to dwellings, which differs from anything else of the same period, anywhere else in the United States. Robert Turner, an Irish Quaker, one of the first purchasers who settled in Philadelphia and immediately gave his attention to building, used no other kind of construction than brick.

In his letter to William Penn, dated the 3d of the 6th month (August), 1685), he states that there are about "600 houses in three years time," meaning since Penn's arrival in 1682. "And, since I built my brick house, the foundation of which was laid at thy going," he adds, "which I did design after a good manner to encourage others, and that from building with wood, it being the first, many take example, and some that built wooden houses are sorry for it: Brick building is said to be as cheap: Bricks are exceeding good, and better than when I built: More makers fallen in, and bricks cheaper. They were before at 16s. English per 1000, and now many brave brick houses are going up, with good cellars."

Turner also notes that good limestone was to be found conveniently, and he also is authority for the statement that most of the early houses in Philadelphia were built with balconies. Where balconies were not erected it was usual to find a pent-house, which in turn became ancestor of the porch, which was a feature of Philadelphia houses at a little later date.

One of the last of the buildings with a balcony, of the early period, but not so early as the time

referred to, was the Loxley House on South Second Street, corner of what was Little Rock Street, and remembered as the home of Lydia Darragh. This building was removed about 1860.

Watson quotes a contemporary letter writer describing the reception to Governor Thomas Penn, in 1732: "When he reached here in the afternoon," runs the quotation, "the windows and balconies were filled with ladies, and the streets with the mob, to see him pass." The Loxley house, or Loxley Hall, as it always was alluded to by Philadelphians in former times, was erected by Captain Benjamin Loxley, a master carpenter and builder in the middle eighteenth century. This building probably was erected in 1759. It was of frame, but its balcony was its striking feature. It is pictured here because it was photographed not long before the building was removed, and thus we have the only authentic picture of an ancient balconied Philadelphia house. It is well to warn against accepting the Loxley house as exhibiting the characteristic balcony of the eighteenth century, the writer's own view is that the general run of balconies were more or less the roofing portions of the early porches. Balconies continued to be erected on dwellings built even to the middle nineteenth century in the older sections of Philadelphia, but these were work of enthusiastic cast iron moulders.

There are still in existence several examples of buildings erected in Pennsylvania before the year 1700. One of these, however, the Penn Mansion, cannot be justly regarded as anything more than it

is. It contains the same frames, brick, and certain other parts of the original which stood in Letitia Street, Philadelphia, until forty years ago. These were removed to Fairmount Park, where the parts were reassembled. While virtually we have the same house that Penn once lived in, we have it with adifference that it has been entirely rebuilt.

At Upland, just outside of Chester, there will be found the Caleb Pusey House. This was built the same year as the Penn House—1683. It has not been much changed from its pristine appearance. The first story is of field stone, roughly plastered, and above this to the gambrel, or curb roof, its gables are brick. The architecture is of the simplest character, and excepting for the curb roof is a strong reminder of the style of houses the English cottagers lived in in the days of Elizabeth.

Gloria Dei, also known as Old Swedes' Church, is another existing example of this seventeenth cntury building. This edifice was erected between 1698 and 1700, although some of its features, notably the porches, date more recently.

In Germantown, a part of Philadelphia which has preserved many examples of American Colonial Architecture, is still standing a house which in part, dates from 1690. This is the picturesque property, known as "Wyck." The house really is a combination of what formerly were two dwellings, and even the later building is ancient, dating probably from about the year 1700. About the middle of the eighteenth century the house was joined with a central hall, and the place given the appearance of a mansion. About a century

WYCK, GERMANTOWN, PA. ERECTED 1690-1700

ago further alterations were made to the building, but its original architecture has not been seriously obliterated.

It is not generally known or appreciated that in the year 1700 there were more brick buildings in Philadelphia than in all the remainder of the Colonies together. In that year there were 700 dwelling houses in Philadelphia, and at least two-thirds of the number were constructed of brick.

All of the buildings were designed by carpenters or bricklayers, but usually by the former, who were the architects and builders of the period. At this time they were not giving any serious consideration to the refinements of architecture, but were building apparently for eternity. The dwellings they erected did not show any influence of anything of the kind to be found in Europe of that day.

First, the builders had an original problem. They had a condition that had not appeared in Europe. The city of Philadelphia had been planned by its proprietor. Its streets laid out with precision, and run straight. The city "squares" as they still call the blocks in Philadelphia, were divided up into lots for purchasers, and the purchaser of a certain footage, received a large plot in the city's Liberties, or lands just outside the city proper. Here was a new city to be built on straight lines, and the houses had to be erected in an economical manner, for the country was young, and its future was all before it.

The first real mansion to be erected was Samuel Carpenter's "Slate Roof House," which stood

on Second Street east side, north of Walnut Street. This building was the first erected in Philadelphia, or in Pennsylvania, which could in any manner be said to have been influenced by similar structures in England, or from an English form.

It was much the largest house that had been built in Pennsylvania up to the time of its erection, which is roughly placed at 1698. Its front, having two bastions, was a reduced copy of the H-type house which began to flourish in England towards the end of the seventeenth century. The rear of the house, however, was perfectly straight across the entire width of the building, thus departing from the true H-type. That the builder of the Slate Roof House had access to one of the editions of Stephen Primatt's "City and Country Purchaser," which was issued in 1667 and again in 1682, seems certain because the type was new then in England and unknown in the Colonies.

If this surmise is a correct one, then we may assert that this is the first instance in the Colonies where use has been made of an architectural book in the construction of a house. The house was erected by James Porteus, for one of the richest merchants in Philadelphia at the time. It is entirely within probabilities to say that Carpenter had his builder send to England for a book to guide him in erecting a suitable mansion house for him. He wanted something better than had yet been built in Philadelphia, and he got it. Upon this building was used the first slates, or tile stones used in Pennsylvania. Penn's house at Pennsbury erected some time later, also had a slate roof, and

for a century these appear to have been the only examples of slate roof in the province, or possiby in any other part of the Colonies.

CHAPTER VI

PENNSYLVANIA 1700 TO 1750

AMERICAN Colonial Architecture differed so much in localities and in times that almost any attempt at close division of the subject must appear to be more or less arbitrary. Thus with this chapter the period intended to be covered does not in itself represent anything of significance that could not be applied to almost any decade in the same time. But generally speaking, the second half of the eighteenth century does exhibit marked changes in architecture in the Colonies from the first half of the same cycle.

There is greater improvement noted in the first quarter of the eighteenth century in the style of building construction in Pennsylvania over the preceding two decades than subsequently occurred. It will be easily imagined that this must have been the case, because by that time the pioneer work had been completed and the inhabitants not only had more time to give to their buildings, but also had more money to use for the

purpose. They also found a better supply of mechanics to do the work.

We are also now approaching the period when carpenters, who were the only architects then to be found in the Colonies, realized that their patrons demanded something better than the primitive, and consequently they were by these circumstances forced to send to England for newer books, the majority of them compiled by men who were architects as well as practical builders.

In the older sections of Philadelphia there still may be seen some of the types of dwellings erected about 1700-1715. Naturally they have suffered somewhat by repairs made in the course of two centuries, but in the main the style of architecture is well defined.

As soon as the first efforts of the settlers to erect suitable habitations had been advanced and the population began to prosper, better types of dwellings and, it should be understood that this was the only kind of building then being constructed in Pennsylvania, because aside from the square-looking Quaker meeting house, jails, and a town hall for Philadelphia erected about 1709, there was nothing else done in the building line.

We find that the best efforts of the carpenters and builders were directed to the erection of dwellings, and they were so intent upon the style they had consciously or unconsciously adopted that when they came to erect a town hall, it was little more than an enlarged two-storied dwelling with a steeple, and the stairways outside. Its dimensions were perforce small because it was

EARLY PENT-HOUSE EXAMPLES, PHILADELPHIA
Built circa 1700

placed in the middle of the city's principal thoroughfare—Market Street, at Second.

It was about this time that the pent-house adornment was added to buildings generally in Philadelphia, and in some of the structures erected not far from the capital of the Province.

While it would not be correct to assert that the pent-house or pent eve attachment to buildings was unknown outside of the province of Pennsylvania, it may be stated that it is a characteristic of early Colonial architecture in that province.

On the other hand, it might be thought that the many-gabled house was only to be found in the buildings of early New England, but this feature was to be found in Pennsylvania, as well, although not identified with that part of the country, but especially was characteristic of New England.

An example of this style of house was standing in Philadelphia until forty years ago. In the structure long known to Philadelphians as the London Coffee House, which stood at Front and Market Streets in that city, was seen a square-planned building with three gable ends, and possibly when originally erected with a fourth. In addition to this feature which was more or less startling in Philadelphia architecture of the period, the building had a squared gambrel roof, each of the dormers beng covered with a section. The style seems to have been peculiar to this building, and while we do not know the builder of it, there is a strong suspicion that it was the work of James Porteus, the builder of the Slate

Roof House and of several other early mansions in Pennsylvania.

From such scattered information as can be collected about Porteus, who was by all evidences the best builder in the Colonies in his time, it appears that he was a native of Dumfries, Scotland, and that he worked in London before coming to Philadelphia. He died in the early part of the year, 1737, and was one of the original associators of the Carpenters' Company in 1724. The London Coffee House, which was erected in 1702, was removed in 1883.

Sir William Keith, who had been Surveyor of Customs in the Carolinas, came to Pennsylvania in 1717 and, being an astute politician, was well received, finally becoming governor of the Province. Keith, who always did everything handsomely, purchased a large tract of land in what is now a part of Montgomery County, in Pennsylvania—1200 acres, in fact, and there designed to grow grain, and possibly erect a distillery. However, he built a road to his land, and on his property erected a house in 1721, and this building, owing to certain peculiarities is worthy of study, because it is still in good condition.

Its exterior architecture is exceedingly plain; it is three stories in height, with dormers jutting from a gambrel roof. The walls are of a local stone, and the design is of the simplest character. But while there is a record that a certain James Kirk, a stone mason, was the builder, it may be set down as a certainty that Kirk did little more than build the walls, for the interior

contains the best example of eighteenth century mural wood panelling to be found in the country; and this statement is made with a knowledge of at least one other Philadelphia mansion of the period being described.

After viewing the interior wall panelling of the Graeme House one cannot put aside the impression that it owes much of its design to the book of the Scotch architect, James Gibbs, whose "Designs" was published in 1728. The lateness of the date of Gibb's book might be argument against his influence, but it is possible either that this mural decoration was executed later than the time usually assigned for the erection of the house, or that Gibbs really made the designs and sent them to Pennsylvania.

There are marked differences in the details of the woodwork in the Graeme mansion and from the designs of Gibbs, but these are more or less simplifications, and the kind that characterized the American Colonial architecture.

It should always be borne in mind that the artificers and builders in America in Colonial days developed a style of their own. It was not original; but then, neither is any other style. Influences of something gone before is inseparable from all styles, but the manner in which the new turn or new thought is given to what is older is what makes originality. It is never good art to startle with something that contains in it nothing familiar. As with all other arts, architecture that is only different cannot be said to be original.

GRAEME PARK, NEAR PHILADELPHIA. BUILT 1721

To do something different is the simplest thing in the world, but to be original is given to the few to accomplish.

In the present day when "Colonial Type" houses are being erected by the hundred in various real estate operations there is good reason for one to pause before he absorbs the erroneous idea projected for his benefit.

It should be borne in mind that there never was a Colonial "type," although the term is used loosely enough, even by those to whom we look for more exactness in statement. Colonial houses, or those buildings erected in the days that preceded the adoption of the American system of government, naturally were not of a type, excepting so far as they might be said to express something different from what was to be found in the mother country during the same period. There were, indeed, many essentially American types of structures in Colonial days, but when a person isolates one of them and makes it *the* type he has failed to fully grasp the extent of his folly.

As an instance of this popular misconception of the subject the writer recalls having seen it asserted with authority that the true Colonial house had five windows to the floor across its façade. In refutation of this assertion, if it were needed, the reader is only referred to the illustrations accompanying this chapter which shows two extremely interesting examples of Colonial architecture, and neither of them has less than six windows to a floor across its front elevation.

Another designation which has achieved acceptance by the majority of writers on the subject is the term Georgian. Although the writer confesses to having been one of the offenders, he is convinced that the term, as applied to American architecture is weak and ineffective. There has been an ambitious attempt made to divide the examples into Periods, but while these may be chronologically correct, they have to do more with time than with architectural design.

The fact is that while these Period Georgian buildings may be so designated for convenience in some parts of the country, in other sections the term is absolutely impotent to adequately describe the houses of precisely contemporary date.

Wyck, the interesting stucco-coated stone house in Germantown, Philadelphia, already mentioned, was erected while William and Mary reigned; the group of small houses shown in another illustration, was built when Anne was Queen, and yet something architecturally from both are to be found in other buildings in Pennsylvania erected when one or another of the Georges was on the British throne. It should not be forgotten that for more than a century there was a King George in Great Britain. Of course, none of the Four Georges influenced architecture, and neither is the architecture of 1800, when George III, still was king, sufficiently described by calling it Georgian.

We shall have to look elsewhere to find labels to fit our American architecture during the seventeenth and eighteenth centuries, and probably,

in the end, we shall find the names for it among the workers in the craft in England and America during these periods.

Even the tentative divisions which the writer has already made into three periods—that Before Books were used; that of the part use of books by American builders; and that which revealed a neo-classic phase influenced evidently by architectural books, is not exactly satisfying, for many reasons already outlined.

For instance, it has been shown that Pennsylvania builders were early guided by plans derived from printed works on architecture. Indeed, when the so-called Slate Roof House was erected, probably no other contemporary structure in the Colonies had been influenced to a like extent from a similar source. In New England, which bases much of its glory upon its literary achievements, there is no evidence that builders' books were at all well known, or used, until the end of the French-Indian War. In Pennsylvania, New York and Maryland, and, to an extent, Virginia, architectural books evidently were fairly common much earlier.

Yet, New England builders, in their way, established a type of Colonial house, and a style of meeting house, or church edifice, as characteristic as anything produced elsewhere during the same period, but the limitations to certain kinds of building materials in that section of the country, caused the builders to select a simpler form, and one that was more nearly English in origin than American.

STENTON, PHILADELPHIA. BUILT 1727

Pennsylvania, the first of the Colonies to be started in a business-like manner, owing to the remarkable skill for Government, and finance, possessed by its Proprietary, William Penn, rapidly rose to a place of importance in commerce and industry. While other Colonies received for settlement persons of slender means, or no means at all, excepting in a few instances, where Englishmen of considerable wealth settled as planters and lived in comfort and idleness, those who came to Pennsylvania at the start were usually men of some means and progressive in spirit. But more than that, they were industrious themselves and worked as well as paid laborers. They were thrifty, wise in investment, and sufficiently daring in enterprise to establish useful industries.

By the middle of the eighteenth century, the capital of Pennsylvania, Philadelphia, was the metropolis of America, although still a small country town. It was the center of commerce, and being about midway between Virginia and Massachusetts, held a commanding position. There was to be found a broader spirit than prevailed in New England, and yet a more conservative tone than was to be found in the South. Consequently it is no drain upon the imagination to picture how such a situation had its influence in building.

Almost immediately after arriving in the country the settlers of Pennsylvania began to erect homes that were intended to be permanent in construction. Hence in the cities and towns, brick was usually chosen for the building material,

while in the country houses and even barns were constructed of local stone. The period of cave-dwelling was short, indeed, and was nothing more than a temporary expedient for the class of persons who went to the Province to settle, had been used to good dwellings in Europe, and would not be satisfied with any kind of stop-gap if it were intended to be permanent.

Having then a thrifty, wealthy, intelligent class of settlers, the first generation had scarcely passed away before there was a demand for better buildings. There were at hand a fair supply of intelligent and skilled mechanics, and as prosperity smiled upon the enterprising Pennsylvanians, they demanded mansions more suited to their new dignity.

A few of these ancient structures fortunately remain for us to study them, and it has been said with some degree of truth that in Pennsylvania, especially in Philadelphia, are to be found today more interesting examples of early Colonial architecture than anywhere else in the country. The Civil War, unfortunately, caused the destruction of many interesting examples of Colonial buildings in the South, although, even there some structures that may be said to be historic, were saved. However, the statement stands as written, for Philadelphia is not compared to the whole country, but to any other city in it.

There is no more interesting example of the American Colonial structure of the first half of the eighteenth century than Stenton, the mansion

of James Logan, Secretary and Governor of Pennsylvania. Stenton mansion was erected in 1727, and displays the hand of the accomplished builder of the period. It has been suggested that the house was built by Porteus, and while the writer has seen no documentary evidence for this statement, he feels it is a reasonable one. Certainly no other builder then in Pennsylvania seems to have been capable of such a well-designed country house.

Excepting only Westover, Virginia, Stenton was the finest mansion in the Colonies in 1727. It stands today a most interesting exhibit of the best design during the first half of the eighteenth century in the American Colonies. It is, in a sense, a more important example of this early period of the Colonial house than even Westover, because Stenton, unlike the latter, never has been restored. It has been repaired, of course, but it never suffered from devastating fire, or other destructive agency, and therefore is an original specimen.

It will be noted that despite the fact that Stenton is one of the best houses of the early period when books were beginning to be used by the American designers of houses, it has six windows in a row on its façade, which ought to be sufficient refutation of the fallacy that a true Colonial design ought to have five. As has been pointed out, the number of windows has nothing at all to do with the identification of the period of a Colonial house.

In another chapter when the whole subject of

LONDON COFFEE HOUSE, PHILADELPHIA
Built 1702—Removed 1883

fenestration in the Colonial house will be discussed, it will be shown that the owner's desires had a good deal to do with the number of windows to be found in his house. It may be recalled that the house erected by John Bartram in 1730-31, was more or less a copy of the Slate Roof House, which had only single windows on each floor in its bastions.

The Bartram House is one of the mysteries of Colonial architecture which never has been fully and satisfactorily solved. Probably this is due to the fact that it probably never has been sufficiently studied. The house, which tradition says was erected by Bartram with his own hands, is totally unlike anything of the kind erected in the Colonies.

Like the Slate Roof House, it is a development of the H-type of design, but not a true copy of it, because the postern side is flat, and the façade is ornamented by three columns. The designs around the windows in the façade are unlike anything found in an American house of the period.

Although the house is said to date from 1730 the tablet set in the front wall over the right hand window contains an inscription that might be interpreted to mean that the house was finally finished in 1770. It is certain that if the botanist built his house with his own hands he could not have completed so large a mansion as it is within a year's time. The columns in front also appear to be an after thought, and the ornaments around the windows in the façade give the impression

of a distinctly later period than that assigned for the date of the erection of the house.

There are indications that the house as we have it today differs in appearance from what it did originally. The three columns in front hold up the roof in the middle, but overhanging the porch is a section of wood, which is out of keeping with the design of this stone house, and evidently is of much later date than the house. There are evidences that originally there was nothing between the stone porch floor and the roof in the middle of the façade, which would be an agreeable design, and the forerunner of a style that afterwards became very popular, first in the South and later in the Northern Colonies.

Virtually none of the woodwork around the exterior of Bartram's House is original, and the dormer windows show unmistakable signs of having been comparatively recent, although no doubt they were replacements of dormer windows in the same locations. The outjutting structures, which add nothing to the design, are undoubtedly of much later origin than the house.

The ancient statement about the active part Bartram took in the building of his home, should be taken with a little less literalness. It is quite likely that he superintended the work, and it is entirely possible that he performed some of the actual practical operations with his own hands, but the later embellishments of the house indicate a practiced stone cutter and carver was employed. The carved stone window facings have been bolted into the walls, which is another indication

that they were carved and set in place after the house had been erected many years. The impression these and other peculiarities of the house made upon the writer was that the carved date of 1770 really represents the final adornment of the building, although the other date on the wall, 1731, probably is that of the completion of the original house.

CHAPTER VII
IN THE FRENCH COLONIES

WE HAVE become so accustomed to considering the English forms of architecture as the only ones to be found in American Colonial types that we have neglected the French colonies altogether. In this, and the following chapter it is intended to devote some attention to a subject fully as interesting as any of the English Colonies offer, and, it may be mentioned in passing in types that survive in Canada to the present day.

These French types do not survive merely as a species of affected interest for what is passed and gone, but because the people in the French parts of Canada merely have continued practices that were either formed or translated from the mother country, three centuries ago.

There is another reason for the persistence of these types, especially so far as Quebec Province is concerned, and that is the severe climate of these northern lands. Much of the kind of architecture with which we, in the Middle States, are familiar could not be naturalized in the North where winters bring not only temperatures as low

as 26 below zero, but heavy snows, and a long period of wintry weather. It is no uncommon sight to see winter's snows lingering in certain parts of Quebec in the middle of May. These facts must first of all be understood before we consider the manner in which the French built, and it may be said, still build their houses.

It might be said in passing that the climate in these parts has been responsible for another thing that should be a lesson to Americans farther south. It is the exception to find a building in French Canada out of repair. One will be told that the people are poor, but such well kept buildings are not to be found where wealth is more abundant.

Champlain, the founder of Quebec, was not a talented artist, and when he strove to give us pictures of the structures he erected on the banks of the St. Lawrence he may be said to have only achieved a qualified success. However, from his statements we are able to reconstruct for a mental vision, the kind of structures the first settlers and adventurers in New France built for their occupation.

Cartier preceded Champlain to the banks of the St. Lawrence by nearly three-quarters of a century. And on one of his excursions the latter discovered one of the settlements of his predecessor, then in ruins about three miles up the St. Charles River, a small stream which empties into the St. Lawrence at Quebec and within a quarter of a mile from the site of Champlain's fort.

From his report of these we learn that Cartier had erected rough wooden cabins which had stone

MONTREAL—TOWER OF FORT DE LA MONTAGNE

chimneys and stone foundation walls as well, and the courageous adventurer and his party had spent one of the stern Canadian winters in his place in 1535. Nothing tangible remains of this settlement, but it may easily be imagined to have been nothing more than a temporary headquarters for the discoverer of the St. Lawrence River.

There is a difference between the objects of Cartier and Champlain. The former did not come out prepared to erect settlements and colonize the new land. His was a voyage more of discovery, and naturally, was only intended to look over the country, and see its possibilities, and, if possible to carry back as much of the riches of the land as he could gather.

On the other hand, Champlain, coming three-quarters of a century later, while also a pioneer, had the advantage of traveling over ground already trod by one of his own countrymen. Indeed, the St. Lawrence had been visited on several occasions by a French adventurer and mariner, who had brought back such rich cargoes of furs that when he suggested to one who was influential at the Court of France that a concession would prove valuable, his suggestion was kindly listened to. Finally a company was formed to work out a concession received from the French king, but the head of this company, Aymar de Chastes, a warrior and patriot, had a larger conception of what was to be done. In his mind France should have a footing in the New World, to advance the interests of King and Church, and thus it may be said that the first honest attempt to colonize North

America was made by France. Other and even some later attempts were obviously not colonization schemes, but bold efforts to mine the riches of the new country, without any other interest either for the aborigines or of permanently settling the land.

It is the history of the early attempts at settlement of North America that the real pioneer work was done by adventurers. They were the Argonauts of the sixteenth and early seventeenth centuries. Just as the gold diggers who infested the western coast of the United States in '49 had no more interest than of becoming wealthy as rapidly as possible and returning home, where amid more civilized surroundings they would enjoy the gold they had won from the earth, so, too, did these earlier discoverers.

It was a vastly different sort of people one finds arriving in New England in the winter of 1620, or in Pennsylvania in 1682. Both of these latter expeditions were composed of men and their families who had emigrated from the home country to begin a new and permanent existence in the new land. These people as soon as they could do so built for posterity, while the early adventurers only built for their temporary needs. In the one we soon find sympathetic attempts at architecture that is more or less pleasing, while in the other we find the coarsest and most primitive construction.

The colonization of Canada followed along the same lines. The first Frenchmen to arrive there were adventurers, and it is asserted that there

were many convicted felons among them, who had been released from French prisons that they might be sent out to settle the new country.

When Champlain sailed for America in April, 1608, the French still had expectations that the St. Lawrence might lead to a passage to Cathay. It was this ship of Samuel de Champlain that carried the first permanent colony to New France, and it was the intention of the leader of the expedition to found a headquarters or central station on the great river from which excursions of discovery could be sent out.

Champlain had been in Canada the previous year, and consequently was not unfamiliar with general conditions. He provided so far as he was able to do so, against the unfavorable ones. Coming with a determination to stay, he brought with him carpenters and other mechanics to erect the buildings that would be required by the settlement. His, therefore, was the first serious attempt at colonization in Canada by the French, or, indeed, by any other nation. From their discovery and partial exploration of the St. Lawrence River, the French made a claim to what eventually was found to be half of the North American continent, although its extent was unknown to these early adventurers.

Champlain's expedition, which founded the city of Quebec, disembarked from their ship on July 3, 1608, and his men immediately set about building "L'abitation," as Champlain entitled the fort and settlement group which he had erected. The site

QUEBEC—HOUSE IN WHICH MONTCALM DIED

was in what is now called the Lower Town in Quebec, although still considerably elevated from the surface of the St. Lawrence.

The site was overgrown with vines and trees, the latter principally walnut, and once cleared the cellar was dug. A foundation of logs, cut from the surrounding forest was built upon with squared timbers, and roughly sawed planks. The first structure erected is said to have been a storehouse, in which were stored the provisions brought along from France. While the work of erecting the settlement was advancing, the expedition lived on board ship, thus foregoing the necessity of dwelling in Indian tepees or wigwams.

While the founder of Quebec has left us a detailed sketch of his settlement, his ideas of perspective seem to have been derived from a study of Japanese prints of a time gone by, although, of course, Champlain probably had no knowledge of Japan at all. In his enthusiastic efforts to show everything, he drew a confused mass of dwellings, platforms, drawbridge, moats, and gallery, that even taken together with his explanatory notes is difficult to understand.

The buildings evidently were severely plain, and of the simplest design, having the most primitive type of pitch roof, and one double window to a side, on each of the two stories. The buildings were grouped within a palisaded fortification, which had the ancient bastions, jutting out in points in various directions. A dovecote, and a sundial placed on the roof of the armory, com-

pleted the group. While the dimensions of the "Habitation" are not given they evidently were modest, as the moat was only six feet wide. There were three dwelling houses for the party, and Champlain occupied the first floor of the building at the entrance.

In order to make the wooden structures proof against the Arctic cold of the Canadian winter, the crevices between the boards were calked. While this term is not especially explained in the accounts of the settlement, it is inferred that it is to be taken literally, because Champlain and his party were virtually all of them sailors, and the calking therefore may be said to have been similar to the kind they were familiar with. In New England, and elsewhere in the Colonies, this kind of construction was performed by the use of clay and sand. Champlain's men evidently used oakum and pitch, such as is used to calk decks and sides of the wooden vessels of his day.

The work had been so persistently pushed through the short, warm summer days that when winter finally did appear, the settlement was comfortable, and thus passed the first successful attempt at settlement in Canada.

Wood construction never was in general use in the French Colony of Canada, and where today one finds a frame building in the province of Quebec, it usually is a modern structure. While further inland there were in the days of settlement vast woods, the soil generally was barren, owing to the presence of rocks in the eastern section of the country. But, on the other hand, it was the presence of these same rocks that en-

abled the settlers to build strongly, for they had at hand all the material needed for stone construction.

Through Quebec runs the Laurentian Mountains, the oldest in the world, being the outcropping of one of the oldest geological systems. Limestone is found in abundance, consequently it was merely making use of the materials at their feet and accepting their good fortune, that the French chose to build of stone. In this case they were fortunate because of the intense cold of the long winters. These long, cold winters have had an unfortunate effect upon the present day inhabitants. So long accustomed to having their houses shut in with thick shutters, they forget, or neglect when the summer comes to open them. The half shutters which the traveler sees in the province today are intended mainly as storm shutters, but he is astonished to find them closely shut in the warm, beautiful days of summer in these latitudes. The principal effect of this inattention is to make the houses chilly in the hottest days of summer. One feels creepy in entering one in August, for the clammy air is disconcerting, and no sunlight is permitted to reach the interior, excepting through the opened blinds. Here and there one finds the half shutters thrown open, but never are the whole storm shutters taken down for the season.

From the oldest existing types of the Colonial structures to be found in Quebec Province today there is every reason to assign their architectural influence to what we are wont to denominate Norman. It is a simple style without flourish, whose

QUEBEC—OLD HOUSE WITH TWO ROWS OF DORMERS

only ornamentation begins and ends with the roof, where rows of dormer windows give a quaintness to the structure.

There are differences to be noted between the town examples of domestic architecture and that of the country. Of course, we expect to find this in other parts of North America, especially in the United States, but in Quebec, where the primitive still lingers, this variety has a tendency to attract attention. Then, again, the country architecture that one finds in the neighborhood of Quebec City is another version of what one finds in the environs of Montreal, which is more than one hunded and fifty miles up the St. Lawrence, and both are in marked contrast with what one finds in the Province of Ontario, where the architecture is more British, where it is not downright American in influence.

One must examine with a great deal of care what one sees that appears to be ancient in Quebec. The oldest-looking buildings are not always those that have been longest built, and some structures which the guide books will tell you have been built for more than two centuries, look as if they might have been the product of the early part of the Nineteenth century.

From these statements it may well be believed that what has been said of the great care taken to keep repaired the houses in this part of the world is justified. The use of stone, especially set deep in mortar, and the walls smoothed to offer little invitation to the devastating effects of

weather, is partly responsible for the good appearance of many of these old buildings.

In Boucherville, on the outskirts of Montreal, one finds here and there a farm house or barn with a thatched roof; indeed, one of the trim-looking ancient country houses in this district is named La Chaumiere, or the Thatched House. At the present time La Chaumiere has a modern roof of galvanized iron. These buildings, however, are not so old as those found further down the St. Lawrence. One of the buildings near Boucherville has a small sign upon it calling attention to the fact that it was erected in 1760. It might be stated in passing that this house has a porch, which is an unusual appendage to buildings in Eastern Canada.

In place of either porch, or hood, or pent-eve, these houses, which usually are one and a half stories in height, have a long, high-pitched roof, which ends in a sweeping curve well over the walls of the building. This offers protection from the sun in summer, and from rains and snowslides from the roof in winter.

One of the outstanding features of the old French architecture which found a home in Canada, was the dormer windows. While the walls of a house in front would only proclaim it to be one story, or two stories, the roof would offer as many as three attic stories, lighted by dormers, which grew less in size as they approached the top of the roof, and none of them is at all equal in size to the dormer windows with which we are familiar in the existing examples of Colonial architecture in the Middle States or New England.

The whole question of fenestration was attacked in a far different manner by the French Colonials than it was by those in the British Colonies. The French had comparatively few windows, and none of them large for the size of the walls, and here one believes that, apart from following the types the settlers were familiar with at home, they deliberately made the wall openings few and small in order to keep the buildings warm in the terribly cold winters they encountered in Canada. Northern France is cold and cheerless in winter, but it does not know temperatures of twenty degrees below zero, although its latitude is farther north than that of Quebec.

In the grounds of the College of Montreal, or the Petit Seminaire, as it is also called, in Montreal, are two round towers, all that remain of the old Fort de la Montagne, which was erected about the close of the seventeenth century. These towers, which are of local stone, were used by the little garrison to defend itself against the attacks of Indians. The towers today have lost all of their warlike character, and are simply picturesque relics of early French Canada. The main point about them is that they show the Norman origin of the engineers who constructed the buildings.

On the other hand, the façade of the ancient Seminaire of St. Sulpice, in Montreal, which dates from 1685, while distinctly French, gives in the little bell tower over the clock, a suggestion of what we have come to regard as Spanish, of the Mission period in California. It will be seen, however, that this detail is French, as the remainder

QUEBEC—HOUSE BUILT IN 1674

of the façade plainly shows by the manner in which the windows open, and the character of the stone work.

In Quebec one will find on St. Louis Street, a quaint two and a half story building, the second floor of which opens on to the roof with two dormer windows, and above these is another, or attic story. This building is said to have been erected before 1674, and the present occupants of it advertise it as the Maison de Montcalm, and give one to understand that in it the French general breathed his last at the Conquest of Canada. Our interest in the structure, fortunately, is to be found in its architectural history, which is a little better authenticated. The building is evidently very old, but its walls and roof are in excellent repair, and very little, if any, of the original woodwork, excepting rafters and joists, are original. The style, however, is distinctly of the period claimed for the structure, although Montcalm did not die in it, but across the street.

Madame de Pean's house, which really was the residence of the garrison surgeon, Doctor Arnoux, at the time of the conquest, in which the French Commander died after the defeat of his forces, is a large and interesting specimen of mansion of the period of the middle eighteenth century in Quebec. The stone from which its walls are built is partly dressed, and the window openings have dovetailing of a lighter stone. The roof, of course, is pierced by a host of dormer windows, which light the third story. The entrance, at one end of the wide front, is severely plain, and the steps to the first floor lie within it, owing to the narrow side-

walks which are characteristic of the old city.

Another early type of dwelling, which dates from the early eighteenth century, is one that fronts on St. John Street, Quebec. It has a wide front, and an immensely high pitched roof, from which are two rows of dormers, the upper row being very small openings. This type, excepting for the high roof, and the double dormers, is more of the type the French Colonials introduced into Louisiana, and a few specimens of which remain in New Orleans today.

As might be supposed, the climate of the Southern city dictated a different form of building to the French from that they had found useful in Canada. In Quebec one is struck by the fact that the general character of the building styles in dwellings has not appreciably been changed in two hundred years. In other words, one still finds there comparatively recent specimens of what might be called French Colonial architecture. This statement is not true of all types of structures, for business houses and government buildings disclose the later and modern influence, but in general there is a disposition to keep the ancient city old in appearance, for its chief commerce is that of welcoming tourists within its gates. Quebec lives in the past, but it has a future.

CHAPTER VIII

IN THE FRENCH COLONIES

CARDINAL RICHELIEU is credited by Edmund Burke for organizing that immense scheme for making France one of the first trading powers of the world, which included ample provisions for the proper establishment and government of Colonies, but he did not have the leisure to perfect his plan. It was, says Burke, "reserved for that great, wise and honest minister Colbert, one of the ablest that ever served any prince, to bring that plan to perfection, to carry it in a great measure into execution, and to leave things in such order that it was not difficult, when favorable circumstances offered, to make France one of the first trading powers in Europe, and her colonies the most powerful, their nature considered, of any in America."

The same author describing France's possessions in North America, wrote that they "consist of an immense inland country, communicating with the sea by the mouths of two great rivers, both of them of difficult and dangerous navigation at the entrance; and one of which is quite frozen

for almost half the year, and covered with thick exhalations and fogs for the greater part of the rest. They divide this vast country, which has our Colonies on the East and Northeast; the Spanish on the Southwest and Southeast; and on the Westward that unknown tract of land which stretches to the South Sea; into two great provinces; the Northern of which they call Canada, and the Southern Louisiana."

What Burke had to say of conditions in Canada more than a century and a half ago is true, to an extent, today, so far as the eastern part of Canada is concerned. "The nature of the climate," he wrote, "severely cold for the most part, and the people manufacturing nothing, shows what the country wants from Europe; wine, brandy, cloths, chiefly coarse, linen and wrought iron." It is true that some of this demand is satisfied today by other parts of Canada, where the weather is more conducive to manufactures, and agriculture.

Even at the time he wrote it appears that, owing to the poor navigation of the St. Lawrence at certain times of the year, the Canadians believed it cheaper to buy their goods in New York. Of the character of the inhabitants, Burke wrote, "So much do the French exceed us in industry, economy, and the arts of conciliating the affectations of mankind, the things that even balance all the disadvantages they naturally labor under in this country."

In 1757, Montreal was regarded as inacessible to all craft but canoes, and for a long period this disadvantage resulted in keeping down the size of the settlement; but a hundred years altered all

that, and for the last century it has been the chief city in Canada.

Writing in the year mentioned, Burke alludes to Quebec being better situated, as it is many leagues nearer the sea, from which, however, it is one hundred and fifty leagues distant, as he notes. "The town," he continued, "is divided into an upper and a lower. In both the fortifications are strong, and the houses well built. They have a grand cathedral and episcopal palace, a handsome college of Jesuits, three monasteries of men, and as many of women; and the town is covered by a regular and beautiful citadel, in which the Governor resides. This city, though the capital of Canada, is, however, not very large. It contains about seven or eight thousand inhabitants at the utmost.

"From Quebec to Montreal, which is about one hundred and fifty miles distant (it is really one hundred and eighty), the country on both sides of the river is very well settled, and has an agreeable effect upon the eye. The farms lie pretty close all the way; several gentlemen's houses, neatly built, show themselves at intervals; and there is all the appearance of a flourishing colony; but there are no towns or villages. It is pretty much like the well-settled parts of our colonies of Virginia and Maryland, where the planters are wholly within themselves.

"With all the attention of the court of France to the trade and peopling of this as well as their other colonies on the continent, they have not yet been able thoroughly to overcome the consequences of those difficulties which the climate, whilst the

place was unsettled, threw in their way; their losses in the wars with that brave and fierce nation of Iroquois, who, more than once reduced their colony to the last extremity, and the bad

CHATEAU RAMEZAY, MONTREAL
Built 1705.

navigation of the river St. Lawrence, which is an evil incurable, have kept back the colony. Therefore, though it is the oldest of all the French establishments, and prior to our settlement of New England, the inhabitants are not above one hundred thousand souls. Some, indeed, reckon them but at forty thousand."

The same writer noted that the great river St. Lawrence was the only location of the French settlements in that part of the continent. Of Louisiana, he wrote in enthusiasm, declaring that in all respects, it was a much finer country than Canada, owing to the flatness of the land and of the "delicious climate" found there. However, it did not thrive as rapidly as did Canada in those days.

We have seen that France's possessions were enormous in extent, and that they were peopled only by small settlements. For almost a century Quebec was virtually the only city in the French colonies. It was, from the beginning, the capital, but it did not thrive as rapidly nor to the same degree as other and later towns in the same colonies.

In Louisiana, the Southern territories of France in the New World, New Orleans for a long period was the only town of importance, and, even there, owing to complications, progress was of small growth.

The method of building in both sections of New France was identical. First came the fortress to protect the settlement from the natives, and around it, or within its enclosure were the quarters of the governing officials. Then, as small dwellings increased in number and importance, came the church, and along with it the seminaries attached to the religious community.

Thus, it was the rule to place the greatest efforts upon the erection of the church structures with the public approval. The Church in New France was the foundation upon which more de-

BASILICA, QUEBEC
Original building dates from 1633

pended than was the case with the English colonies, consequently, to this day some of the best preserved structures in French Canada are the churches. The state of repair in which they are kept is one of the marvels to those who have seen how these sacred edifices are kept in some other parts of the world.

The Seventeenth century was at its end before New Orleans was founded, or almost a hundred years after the founding of Quebec. Its growth was slow for a time, notwithstanding the fact that it lay in a more temperate climate, and that it did not have the blasting winters of the north.

In 1726 Madeleine Hachard, who had joined the Ursulines in Paris, prepared for missionary work in the new land, found upon her arrival with the party in New Orleans that the convent was not yet finished, so the party of ladies for the new institution were quartered in Bienville's hotel. As this structure was described as the "finest house in town," Sister Madeleine's picture of it which she wrote to her father is not without interest.

"A two-story building with an attic....." she outlined it to her parent, "with six doors in the first story. In all the stories there are large windows, but with no glass; the frames are closed with very thin linen, which admits as much light as glass. Our town is very handsome, well constructed and regularly built, as much as I could judge on the day of our arrival; for, ever since that day we have remained cloistered in our dwelling.....The streets are large and straight; the houses well built, with upright joists, filled with

mortar between the interstices, and the exterior whitewashed with lime. In the interior they are wainscotted. The colonists are very proud of their capital. Suffice it to say that there is a song currently sung here, which declares that New Orleans is as beautiful as Paris. Beyond that it is impossible to go."

From this description it will be noted the influence climate plays in the size and character of windows in a house. The windows in French Canada are not particularly large and they are not especially numerous, excepting in a few instances, such as the old palace of the Archbishop of Quebec, a structure which dates from the very early part of the eighteenth century, but which has had a modern gable, much ornamented, added to it, and thus disguises the really great age of the structure.

The numerous doors on the ground floor of the New Orleans structures is one of the characteristics of the Colonial French architecture, which still survives in a few buildings. The use of mortar or stucco, was used both by the French and by the Spanish, during the regime of the latter, and consequently it is not always easy to determine the origin of an ancient house there, unless one has some documentary evidence.

The old houses, meaning those of the early settlement, are all of them low structures, seldom reaching more than two stories, and the dormers which are a characteristic of Quebec, are notable by their absence in this warmer climate.

Normandy influenced the architecture of Canada in the colonial days, while the cities of Paris,

Havre, and other larger towns suggested the types of buildings to be found in New Orleans in the days of the French colony. Of course, the southern city could not boast of any structure at all equal to the magnitude and magnificence of the great places in the French capital, but nevertheless, in a small way, it is evident that a reminder of Paris was what the colonists had in mind when they erected a building.

Seven years were required to finish the convent for the Ursulines in New Orleans and it finally was opened with formalities in 1734. It is regarded as the oldest conventual structure in the United States, although, of course, it does not boast of the years of the Ursuline convent in Quebec.

Most of the original French buildings in New Orleans fell prey to the conflagration which swept the city in 1788. Therefore, it is only here and there that anything like Colonial is found. Fire and the ravages of warfare swept Quebec several times, but there are considerable remains of early structures, sufficient to form an idea of what the city presented in its infancy. In New Orleans, the city rebuilt after the fire, took on a Spanish character, and more of this type of structure consequently, have been preserved.

One of the oldest buildings in Quebec is the convent of the Ursuline nuns. It is not the original structure, for that was built in 1641, and both it and its successor were destroyed by fire. The present building dates from about 1687, and, in the main, may be regarded as similar in design to

the original building, although, naturally much larger, having received additions from time to time since its erection.

Like many of the other buildings in French Canada, it is constructed of stone, which was prob-

OLD PALACE OF ARCHBISHOP, QUEBEC

ably more easily obtained than was brick in the early days, and was a material with which the French were familiar in the mother country.

Stone and plastered or stuccoed covered walls were generally found in the older parts of the city.

Brick is a more or less modern innovation in Eastern Canada. In Louisiana, in the Colonial times, the stuccoed wall, usually whitewashed, was almost the rule in city structures, and in both of the French colonies, but more especially in Quebec, there was little that could be regarded as daring or novel in the design of the buildings.

This is all the more remarkable for it was about the time these colonies were formed that an architectual renaissance was being experienced in France. There, as in England, the books of Palladio were being studied with a view to improving the old familiar forms. It resulted in putting something of the ancient Roman and Greek forms into different kinds of buildings from those which the ancient peoples erected. It was an attempt to adapt for more modern times, the designs so much admired in the buildings of antiquity.

A century later another era of renaissance was going forward in America and resulting in what we have been pleased to call rather indefinitely Colonial architecture.

The architecture is almost severely plain in Quebec. There was no disposition to draw inspiration from the ancient models of the Greek or Roman, although in some of the restorations there are signs that this influence was not entirely ignored, even if it was not a leading idea in such work. It is unfortunate, for students, that the work of restoration in some instances has almost entirely obliterated the original character of the buildings. Especially is this the case in the church edifices that have had to be rebuilt.

One notable exception to this rule is to be found

in the original church of St. Anne de Beaupre, in Quebec Province, about twenty miles east of the city of Quebec. Here the original structure, having outgrown its usefulness by reason of its inability to hold the immense throngs that crowded it, the church was taken down in 1878 and rebuilt about five hundred feet away to give room for a newer and larger edifice.

Here the original appearance of the church has been admirably retained, and the interior decorations of carved wood, elaborately painted in the most joyful colors, have been introduced just as they were in the church before its removal. The design of the church is of the simplest character. There is a large central door in the front, and on the sides are large windows, more or less Norman Gothic in character. But the steeple or belfry is interesting because it contains two stories of openings, and has a roof not unlike that of the tower of Independence Hall, in Philadelphia.

This form of steeple is also found in another ancient church in Quebec City. This is the Basilica, which was burned a year ago, and is now being rebuilt, and restored to its condition before the fire.

The Basilica dates back to 1633, but only the tower, and some of the walls are so old, for the church was rebuilt in its present form in 1760, according to the guide books, but there are evidences of a later addition. The towers are different in design, but the belfry follows to some extent the design of that of St. Anne's, which, however, was built in 1658, and therefore, the state-

ment might more properly be reversed: the idea of St. Anne's belfry might have been influenced by that of the Basilica.

In Montreal one of the most interesting of the colonial structures is the Chateau de Ramezay, at one time the home of the Governors of Montreal, and erected in 1705. The chateau was erected by Claude de Ramezay, Governor of Montreal, for his official residence. At the time of its building it may be said to have been the seat of Government for that section of the country. Later it was the headquarters of the fur trade in Canada, and for a time after the British conquest in 1760, it became the Government House of the resident. It has an interest for Americans inasmuch as it was the headquarters of the Continental Army in Canada during the early years of the Revolution. It may be recalled that it was the meeting place of the American Commissioners, among them Franklin, who went north to enlist the Canadians with the American cause. Even Franklin's efforts failed. The French Canadians refused to ally themselves with the Americans.

Although it is a low, rambling structure, the chateau is a building of great interest. The front is one and a half stories in height, but in the rear the building is two and a half stories from the street level. The rooms are spacious, and indicative of the period in which it was built. The basement story contains the bakery, the kitchen, and an immense vault, which one will be told was used as a prison by some of the early Governors. The walls are of stone, very thick, covered with stucco and painted white. Exteriorily the only acknowl-

ENTRANCE, ST. SULPICE, MONTREAL
Building dates from 1685

edgement paid to the artistic is to be found in the Norman tower. Otherwise the building is particularly plain, and even the interior woodwork is not very ornamental, excepting in those apartments which one is bound to suspect is of much later origin than the building itself. The apartments, for the greater part, are as plain as the cells in a monastery. A row of trees in the garden in front of the chateau, interferes with the obtaining of any adequate photograph of the façade.

Some of the Post-Colonial structures in Montreal reveal British influence rather than French. This is true of some of the ancient residences in the old part of the town. The oldest buildings in Montreal are those of the ancient Seminary of St. Sulpice. A part of the Seminary is said to have been built in 1685, but it is probable that the façade is of a somewhat later date, particularly the entrance, with its square clock and bell tower above it, more Spanish in suggestion than French. It is quaint enough to give the appearance of age one suspects. The windows, it will be noticed, are French, a style which is now being adapted by the most modern of metal window manufacturers.

It is curious to find that a style which the French have maintained for centuries suddenly being adopted as the best type for dwellings of the newest design in this country.

The Church of Notre Dame de Bonsecours, which is probably the oldest in Montreal, dates from 1657, but there is nothing in the present structure, with its highly ornamental spires and statues, to suggest the original building. It is ad-

mitted that the old edifice was reconstructed in 1771, and the guide books remark of it truly, that it was spoiled by tasteless restorations.

The story French Colonial architecture has to tell is one of the characteristic desire for strength and utility, rather than for the largely ornamental, peculiar to the thrifty character of the French people. Such Colonial architecture as is to be found in Eastern Canada today is not likely to inspire more than here and there a suggestion in simplicity in design. Plainness is the keynote to the architecture, and it is remarkable that in New England, where it might be thought the idea of strict adherence to economical construction would be the dominating influence, there is more that is ornamental in the design than is to be found in Canada. Yet, the French Colonies were founded at a time when the French kings were lavishly bestowing their money upon structures of great beauty and a French Renaissance in architecture was under way.

CHAPTER IX

IN THE SOUTH IN THE EIGHTEENTH CENTURY

IN THE South, as well as in other parts of the Colonies, French as well as English, there were numerous styles in houses and in public buildings, in the Eighteenth century, yet from out of all this variegated architecture there is to be found what may be called characteristic types.

Generally speaking it may be set down as a formula that the Colonial French settlers built of stone; the Spanish, of stucco, with more ornament around doors, windows and in iron work; the English in New England chose wood for their structures, and the Middle Colonies, especially in Pennsylvania and New York, and in the Southern Colonies, along the Atlantic seaboard, made more general use of brick in their construction.

The use of materials, as may be imagined, had something to do with the style of architecture chosen for each. This is essential and, in a measure, is a component part of all architectural styles. One could not build a great cathedral of wood, though one may, and frequently does, build

a barn of stone. In those days as in these, the selection of building materials went hand in hand with the design of the structure to be erected. Naturally the workers in those days did not have the wide range of styles to choose from, even had they been so inclined. They were not seeking novelty so much as they were providing comfort and convenience, so long as it could be attained economically. In a few instances, such as in the houses of the powerful and wealthy of the time, what were regarded as palatial houses or mansions were occasionally erected.

To a large extent, it is these houses of the great that attract attention in the present day, and when one speaks of Colonial architecture the mind instantly recalls one or another of these specimens. However, they were the smallest part of the architecture of the time, but as they have survived in greater number tban the more humble buildings, they receive more attention of students.

There is good reason for this situation, for they represent the best of the styles then in use, and so far as their designers could express themselves, were things of beauty. They are worthy of study, and a fountain of inspiration for the architects of the present time. The revived Colonial building is a more correct structure than were those erected in the Eighteenth century, but even so, it loses something by very reason of its correctness of line. In other words, the woodwork today is the product of a mill, while in the Colonial times all the woodwork was the product of ingenious carvers and joiners. Their work did not have the perfection of line, but they did give it the

personal touch, which never can be achieved by a mill.

One of the peculiarities of Colonial architecture in the Southern settlements was the piazza, or porch, or portico, as the elevated platform around the houses or in front of them, are indifferently termed. As a matter of fact, although this feature is popularly supposed to have been indigenous in the Southern Colonies, it really did not originate there, but in the West Indies, especially in Jamaica, where the British, being an ingenious and practical people, designed the piazza to suit conditions found there.

In the anonymous History of Jamaica, published in 1740, we have several descriptions of the style of buildings erected there at that time.

"The Governor's house," says the writer, "faces the Great Parade in Spanish Town; one part of it consists of two stories. It was lately rebuilt by his grace the Duke of Portland, and is of stone, a very commodious house. A little court adjoins to the great dwelling house, where several handsome apartments, now commonly used only for lodging his excellency's servants. It has a garden towards the west, which is generally kept in excellent repair."

This paragraph gives some idea of the character of elegance maintained by the ruling class in Jamaica. The houses were spacious but low, owing to the frequency of earthquake and hurricanes, the latter occurring with great regularity at certain seasons of the year.

Speaking of the public buildings of the chief

WHITEHALL, ANNAPOLIS, VA. *Built c. 1760*

town, the same writer describes the courthouse, "where the chief justice and his associates sit in time of Session," as a "small square building, about forty foot each way."

But the general character of the dwellings of the planters or persons of the better class is disposed of in these words:

"The gentlemen's houses are generally built low, of one story, consisting of five or six handsome apartments, beautifully lined and floored with mahogany, which looks exceeding beautiful. They have generally a piazza, to which you ascend by several steps, and serves for a screen against the heat, and likewise is a way of enjoying the benefit of the coolness of the air. In the towns there are several houses which are two stories; but that way of building is disapproved of because they seldom are known to stand the shock of earthquake, or the fury of the storm."

The negro slaves were pitifully housed, according to the same authority, "having," as he says, "nothing but a parcel of poor, miserable huts, built of reeds, none of which contain upwards of two or three persons."

Those who like to trace the origins of certain types of modern structures may be interested in the description of the general type of dwelling in Jamaica in 1740, as outlining what we have come to know as the bungalow. The reasons for the latter in the Twentieth century are radically different from the reasons that inspired the original type in Jamaica in the Eighteenth century, and it may be mentioned, as we go, that the only mahogany that finds its way into the modern

bungalow enters as furniture and not as flooring nor as mural panelling.

As soon as the Southern planters became more or less opulent they began to erect large mansions with great porticos and piazzas. Sometimes these were two stories in height, as seems to be more or less typical of Louisiana, where there survive some specimens, but these are of the later decades of the Eighteenth century where they are not of the early Nineteenth century.

As a matter of fact what has become known as the typical planter's dwelling in the South does not date before the Revolution, and it may be said to be one of the last designs of what with any propriety at all could be called the Colonial period.

In the period just before the Revolution and immediately after it, a part of Louisiana, particularly New Orleans, was a Spanish possession, having been given to the Spanish King by his generous friend, the King of France, much to the chagrin of the French settlers at the mouth of the Mississippi. This led to that locality taking on a Spanish tone in its architecture, which was more joyous and ornamental than were the French styles that had preceded it in New Orleans.

It should be remembered that Louisiana was a Colony long after the American Revolution, being a possession of Spain until 1800, and then of France, until it finally was ceded to the United States in 1803.

From 1768 until 1800 it was a Spanish possession, but the Spaniards never succeeded in pacifying the French there whom they ruled. It was

not a very populous district even at the time it came into the possession of the United States, if one may judge from the description of New Orleans, as it was in 1803, which George W. Cable has given in his "Creoles of Louisiana."

Mr. Cable pictures a spectator viewing the town from the masthead of a ship in the harbor at the time, and writes: "One looked down upon a gathering of from twelve to fourteen hundred dwellings and stores, or, say, four thousand roofs —to such an extent did slavery multiply the outhouses. They were of many kinds, covered with half-cylindrical or flat tiles, with shingles, or with slates, and showed an endless variety in height and in bright confusion of color and form —verandas and balconies, dormer windows, lattices and belvederes."

Thus, after almost a century of settlement, there were only fourteen hundred of decent dwellings in New Orleans. It is easy to picture the slow progress of the crescent city during the period when it was a colony. By that time Eastern Louisiana was settled by Anglo-Americans, but on the west bank of the Mississippi there still were some French and Spanish communities. The fact is that neither France nor Spain ever gave much thought to this southern Colony, and such progress as New Orleans has made has been under the American flag.

They were much the same type of quiet, pious, contented people as settled in Canada, and they were not empire builders in either province.

From the southern Colonies we have derived

"CONCORD," LOUISIANA. *Built c. 1780. Burned 1902*

two of the Colonial types found in the larger mansions, yet neither of the styles originated in the South, although it was there that they received that American treatment that naturalized them, and really made them different from anything of the kind to be found in England or France of the same time.

Like the styles in dress, styles in architecture were imported from Europe, but were not common in the Colonies until about the time they were being abandoned in the mother country.

Mount Vernon, which was erected in 1743, but later altered, is a striking instance of the Americanization of an English type of country house. It is true that its exact prototype does not exist, but the general character survives. Early in the Eighteenth century those architects who made designs and published them in handsome volumes, some of them in folio, showed interest in a country house, which consisted of a single block, or the dwelling proper, and two end buildings, connected by means of a circular colonnade, or cloister-like structure.

Aside from this feature which is to be found in Washington's home, it will be admitted that the only other characteristic of this historic house is its portico, or piazza, from the deck of which the first President was pleased to gaze upon the beautiful waters of the Potomac.

One of the early designers of this type of house was John Crunden, who published in his "Convenient and Ornamental Architecture," which went through at least two editions, one which the writer has seen being that of 1788 and de-

THE CABILDO, NEW ORLEANS, *Built c. 1780*

scribed as "a New Edition," many designs of "most grand and magnificent villas." His designs began with a farm house and traveled through various grades of dwellings up to the magnificent villa.

Like the majority of the British architects of his period, Crunden was a disciple of Palladio, and he acknowledges his indebtedness to the Italian, by calling his most magnificent design a villa in the style of Palladio.

It is easy to understand that none of these designs, nor even those of Gibbs, another of the group of British architects to which Crunden belonged, and who published a volume of designs in 1728, could be used without alteration by American builders of the time. The requirements in the Colonies were vastly different from those of the gentry in the England of the early Georges.

In the South especially, there was a demand for something more suited to the conditions prevailing there. It was a land of slavery, and while slaves were almost universally used as household servants, the majority of the slaves were used to work in the fields. The problem of keeping the races sufficiently near to be useful as servants, and at the same time far enough apart for social reasons, called for a different type of country house than was required in England where all the servants were of the same race and naturally more intelligent and not so different in the social scale.

Mt. Vernon was evidently suggested, so far as the design went, by one or another of these Brit-

MOUNT VERNON, VA. *Built c. 1743*

ish books of architecture which were common about the time it was erected. While the English country house was constructed of stone, the home of Washington, on the banks of the Potomac, was erected of wood. This difference of materials alone would authorize a departure from the British designs, such as one of Crunden's, for instance. However, it followed in general layout the mansions of Crunden and of others of his contemporaries, with such variations as the Virginia builder and the owner believed desirable. It is a curious fact that this type of country house never seems to have penetrated further North than the lower counties of Pennsylvania. It is not found in New York nor in New England.

What seems to be popularly regarded as the type of old Southern plantation house, while dating back to the Colonial period, really is somewhat later. However, until 1902 there was in Louisiana, near New Orleans, one of these typical buildings known as "Concord." In this house two of the Spanish Governors during the period in the late Eighteenth century, had their residence—General Gayoso de Lemos, who was one of the Spanish Commissioners who was engaged in 1795 in making the transfer of the Mississippi to the United States being one of them. The building, of course, dated to a still later period, but probably not earlier than 1780.

It was destroyed by fire in 1902, but a picture has been found which shows it before its destruction. From this it will be seen to have been a large, square-planned structure, with a second story piazza running around the entire house,

and reached from the ground by two winding stairways under a pedimented portico. The building was a three-story structure with dormers emerging from the roof in front and back.

The pedimented portico is another influence derived from Palladio, although its builder may not have heard of that architect, but of his students, or rather, of their books of designs.

The origin of this feature which was frequently used by architects in the early Eighteenth century, is found in the early Grecian buildings in Athens. Especially is it the feature of the famed Temple on the Ilissus, and in a more elaborate manner was it a part of the Erechtheum. While these structures are among the best types of pure Ionic, when their designs were translated by British architects and again adapted by American builders of the Colonial period, they were transformed into a degenerate kind of Tuscan.

The modern use of this feature seems to date back to the villa near Vicenza, which was designed by Palladio. Lord Burlington, who did a great deal to advance British architectural taste in the early years of the Eighteenth century, copied this for his villa at Chiswick, and it got into Gibbs' book, as the feature did into the published works of other contemporary architects.

In New Orleans there is to be found an example of the Spanish public building of Colonial days. This is the Cabildo, which dates from about 1780. It was the arched ground floor, and above it a rich second story, with wide windows, and ornamental iron balconies. The third story contains some interesting but ugly dormers breaking

through a Mansard roof. It is a bit of Seventeenth century planted in the Eighteenth. The façade is broken by a pedimented structure, but without columns, excepting for the pilasters, which adorn the front wall of the building.

In Maryland, the so-called plantation house was not so familiar as it was further South, yet it is not correct to even infer that Maryland produced a country house that might be deemed typical. One of the most interesting examples of the later period of Colonial country house in Maryland is Whitehall, which was erected by the Royal Governor, Horatio Sharpe about 1760.

It is a fine example of the country house with the Palladio portico, which after having been in disuse for a long time was being revived in England then. The architects who were then, about 1760, making use of this style, were adding what they considered to be improvements upon it. However, when this design was introduced in the Colonies it was simplified to a large extent. Thus, while the portico of Whitehall calls to mind the entrance of Fonthill, in England, built just before it, the only resemblance lies in the Ionic portico, with its pedimented roof. The stairways leading to Fonthill are high and elaborate in their form, while in Whitehall, as in the Woodlands, in Philadelphia, built in 1770 by William Hamilton, which also seems to be derived in part from the same original, the portico is the mere shadow of that of the great English house.

Whitehall, which lies just outside of Annapolis, Maryland, overlooks the Chesapeake Bay, while the Woodlands is situated upon a hill and com-

mands the Schuylkill River, a stream of great beauty at the time Hamilton resided there, but now an eyesore, owing to the encroachments of commerce and industry.

This Palladian portico may be said to have been the last phase of American Colonial country house architecture, certainly it was the last imposing feature introduced into the large country mansion. After these examples which seem to have been built between 1760 and 1770, the porticos, where they existed at all degenerated into a kind of porch, which we are pleased to term Colonial porch in these days when this feature is being added to modern dwellings of more modest proportions.

This Palladian portico is not found north of the lower counties of Pennsylvania, although there were examples that seem to have been founded upon this design in New York, but these are of later date.

We have not much space to refer to Church architecture of the period, and, indeed, it might very well make a book by itself, but it is well to understand that until about the end of the Colonial period, the churches usually had earth floors, and, of course, were not heated in the winter time. These facts, of course, were interpreted in the designs of the buildings, in the South, especially, for the churches were entered on a level with the pavement, and chimneys absent from their skyline. On the other hand, few of the Colonial churches were large, and as for design, they were as varied as they were numerous. There was for the Established Church, of course, a set

plan, which was not deviated from, but the architectural design proper and the materials used then, as now, depended upon the desires of the parish in which they were erected.

CHAPTER X

NEW ENGLAND AFTER 1750

IN New England in the later Eighteenth century, or the later Colonial Period, roughly speaking from 1750 to the end of the Revolution, or 1783, the outstanding characteristic of the Colonial architecture was the demand for greater elaboration, and, it must be confessed, a confusion of detail.

There are reasons to suppose that the Palladian window in the eastern wall of Christ Church, Philadelphia, was built about 1735. In that event it probably was the first window of that design to be erected in the Colonies. Certainly no other example of this style is nearly so perfect as this one in Christ Church, and, as its design was not adapted to mansions in its vicinity for some years, it may be said that Connecticut where may be seen an example in a mansion still standing, can point to the only other very early Palladian fenestration. The Connecticut example is really only an adaptation and dates from 1732. It is part of the entrance design to the Capt. John Clark house, South Canterbury.

The whole subject of the Palladian window is a particularly interesting study, and something more may be said of it in a later chapter. At present it is only necesary to say that in the few examples of its introduction into the walls of New England houses the effect has not been very happy.

Sometime about 1753 the New England builder began to elaborate the entrance porches to the houses he constructed. At first this elaboration was more characteristic of desire than it was remarkable for accomplishment. In other words, it was ambitious but not much more than an evidence of good intentions. But it must be recalled that at that time the classic influence which began to overspread England had not been fully felt in the Colonies. But the period of waiting was a short one, and by 1760 in New England, as in other parts of the country there was on every hand evidence of an awakening from the primitive types and architectural style began to show that improvement which, excepting for a generation in the first part of the Nineteenth century, has continued ever since. There have, of course, been lapses from good taste, especially during the fifties and sixties in the last century when the iron fronts asserted themselves, though fortunately not in dwelling architecture.

About 1760 there was evidence of improvement in design in the larger New England house. The classic revival in Europe had reached these shores and the builders who sought to be modern in their time naturally followed the trend or the

VERNON HOUSE, NEWPORT, R. I.
From the White Pine Series of Architectural Monographs

fashion as it may be called. They were not satisfied with servile copies of what the British architects were doing, and in their adaptations of the British design they contrived to give an air of originality to their work.

While some of this work is admired today, particularly by motor parties passing through the beautiful, tree-lined streets of a New England town, the truth is that in the main the designs are over-elaborated, and the simplicity of the Greek or Roman design which had been the motive was subjected to indignity.

There is another side to the subject and it never should be forgotten in the event that one inclines to criticism colored with harshness, that these New England builders of the Eighteenth century had to translate their designs into wood, while the Greeks intepreted their designs in stone. Truth to tell, the New England builder of the Colonial period was a genius, working as he did in a medium that at first seemed to be stifled by classic limitations.

Some of the Palladian windows which one finds in second stories, over classic entrances frequently are as much a contortion, as the entrance itself, while the latter seems to have been inspired by the beautiful lines of the Temple on the Ilysus, requires no little imagination to reveal its origin.

During this period it is found that many of the larger houses erected in New England had a row of five windows in their second story. It might be said that this fenestration plan is distinctively New England, and not, as some have believed, a

general feature of the Colonial house. The window placement of houses built contemporary with these, found in the South and in Pennsylvania do not appear to have followed similar plans, although it is possible to find here and there such a windowed house both in Pennsylvania and in the South.

The subject of placing windows in a front was an important one. The size of such openings in the Colonial period when artificial lighting was scarcely a substitute for daylight at all, and it was necessary to have as great illumination from the outside as was feasible, taking the size of the house and of the apartments into consideration demanded nice calculation.

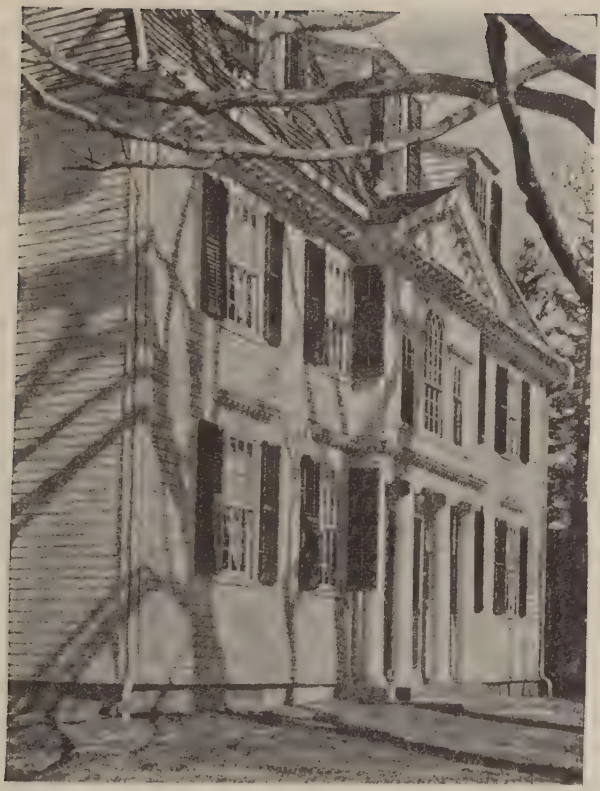
Many of the builders' books published by architects in England at this time gave considerable space to rules for the proper size of rooms and windows, according to the dimensions of the plan. It is for this reason that all Colonial houses have large windows. If one will compare them with the windows in modern houses he will realize that the Colonial builder had a different problem from the architect of today, who knows that with modern systems of lighting, heating and ventilation, that he may make the rooms and the windows any size that appears to be economical. Indeed, it was just such an impulse that caused the builder of the Eighteenth century to construct the houses he did. He, too, strived for economy, and he found the solution in an abundance of daylight let into the house. It is this feature that lures the modern traveler into the entrancing regions of the interior of a Colonial mansion. On

every side he finds a flood of daylight, while he probably has only known the pleasures of electric lighting.

While it is true that some of the Palladian windows found in New England houses occasionally verge upon the atrocious, it never should be forgotten that the men who made them were working at considerable disadvantage. They were not artists, but carpenters and artisan carvers, who were doing the best they could, and at least revealed the beginning of a taste for the classic.

In their efforts to compose an impressive entrance they occasionally committed an artistic crime. It is only necessary to see the way some of these Palladian windows have been crowded into an entrance which evidently was unsuited, to understand what is meant by the use of the term artistic crime. Frequently the work thus introduced may be admired if isolated for the purpose, but as a part of the whole it often draws upon itself condemnation for lack of proportion and discrimination on the part of the designer.

Another feature to be noted in New England houses of the last half of the Eighteenth century is the gradual abandoning of the gambrel roof. So far as one may venture a date for this exodus that of 1775 is as serviceable as any other. Certainly there evidently were few houses erected after that date in which this style of roof appears, unless one includes some of the very latest buildings, which seem to offer as many features of the Colonial period as the architects and owners can remember.



SHELDON TAVERN, LITCHFIELD, CONN.
From the White Pine Series of Architectural Monographs

It was during this later period of the Colonial in New England that doorways began to assume the character of works of art. Here again, proportion seems to have been forgotten, for many of the doorways and doors are excellent in themselves, but they are appended to houses that are unfitted for them by their design and general character. Of course, they are admired by many who lose sight of the fact that they really belong to another style of house altogether.

But this spirit of over-elaboration is one of the characteristics of this period of American Colonial architecture wherever it is found. The spirit of masterly restraint had not been felt by these ambitious artificers. They were overwhelmed by the renaissance of the Classic which had passed over Western Europe, and using the books derived from England for their entire knowledge of the subject, they introduced the Classic revival in American architecture. Taking all in all they worked very well, if not always wisely.

In some of the New England houses erected during this period will be found a feature which does not appear to have been characteristic in any other of the sections of the Colonies, although it would scarcely be accurate to assert that it never occurs, and this is the placement of the window openings in the façades of large houses. It has been observed that frequently the builders placed windows in pairs, or twins, and between them arranged an isolated window of the same size. Thus we have the five window front on the second story level already referred to. It should not be

understood that the five winows invariably were arranged in this fashion. They were not, and a different arrangement was even more frequent, but this characteristic has been pointed out to emphasize the fact that this feature is to be looked for in New England Colonial architecture rather than elsewhere.

One of the best examples of the better designs of the later Colonial period in New England is the Vernon House in Newport, Rhode Island. This mansion was built about 1768 and thus may be said to have been among the last of the good examples of this middle period of development. About 1770, and just as the Revolution was opening, the last stage of the development of the Colonial design was beginning, not only in New England but in the Colonies generally.

The habit of alluding to these various stages of development as Georgian, pre-Georgian, or later Georgian, as has been mentioned before, is not exactly descriptive of the types. It has been the aim of this series to point out that the Colonial types were chiefly geographical, and that Georgian does not express the idea intended to be conveyed.

It is true, of course, that they were designed during the reigns of the Georges. However, as that family of British Sovereigns reigned for almost a century, and at the end nearest to us, lasted until well into the Nineteenth century, long after the Colonies had ceased to be appendages to an European state, the culture, or such culture as the Americans of the time possessed had be-

come more cosmopolitan, and their ideas of architecture, as of many other things showed a tendency to absorb various other influences.

The spectacular Napoleonic era had the effect of turning all art and literature into new channels, and the Americans followed the lead, absorbing, adapting and improving upon the new thought.

It is to the works of Sir William Chambers, an English architect, who died in 1796, that we owe much of what we regard as typical of American Colonial architecture, although he never designed a single house that might even with courtesy be said to have been the prototype of an American dwelling of the period. Yet in his works, which dealt with what he termed Civic Architecture, he pointed the way to an adaptation of the classic forms of ancient Greece and Rome.

There was a contemporary of Chambers, who is regarded in some quarters as his superior as an architect, Robert Adam, who also, through the medium of his published works, was responsible in a measure for the trend that the American builders of the later Eighteenth century took in their designs of dwelling houses. Adam, who was two years younger than Chambers and who died two years before the latter, was a lover of detail, and as it was classic in its general theme, he became the most popular architect in England and his work had sufficient popularity in America to have been freely used by the carvers and builders of the later Colonial period.

To both these men, and in a measure to Wren, who was of another time, the best features of our

PIERCE-JOHONNOT-NICHOLS HOUSE, SALEM
Built 1782—From Cousin & Riley's "Wood Carver of Salem"

American architecture is due. It should be borne in mind that while Wren and Chambers designed for works in stone, the American builder in the Colonial period had to build in wood or brick, excepting for rough stone, which was not well adapted to these classic lines. Roughly speaking, it might be said that Chambers influenced exterior design, excepting for the detail of doorways, and Adam was the master to whom the American carver of the period looked for his inspiration for interior decoration.

Adam, it will be recalled, although an architect, made a number of designs for furniture, and for mantles, doorways. Many know of him only as a creator of furniture styles, but that was not his original profession, for he occupied the office of Royal Architect in England.

While Chambers derived his inspiration from the temples of Greece or Rome, Adam was influenced by the newly revealed treasures of the buried city of Pompeii. The one therefore was an advocate of the massive, and the other of the delicate as expressed in the details of interior decorations found on the walls of Pompeii houses.

In referring to these men as masters for the American builders of the Eighteenth century it is not intended to minimize the work these native artisans accomplished. Neither should it be thought that they possessed no originality. Indeed, had they been deficient in this respect, we never should have had the remarkable examples of their taste we are proud to possess today.

All originality lies in the successful working

out of an inspiration, which seldom if ever is really original. The originality consists in revising, improving or otherwise adapting some other work that has gone before. It should also be a work of some popularity, too, because while any person can do something different, it requires genius to do something that is original.

With this explanation it may be asserted that the New England builder of the late Colonial period displayed originality. He worked out for his own use ideas which could not have been successfully transplanted without such treatment. On the whole, his work is a pleasure, despite some deficiencies which were unavoidable, when his limitations are taken into consideration.

Some of the most interesting of the examples of New England architecture of the last Colonial period and what might be called the Post-Colonial, in which the general motives in ornamentation and construction were similar, are to be found in Salem, Massachusetts. A great deal of this most admired Salem architecture is due to one of that city's native geniuses, Samuel McIntire, whose work has been the subject of an informative and entertaining book by Frank Cousins and Phil. M. Riley.

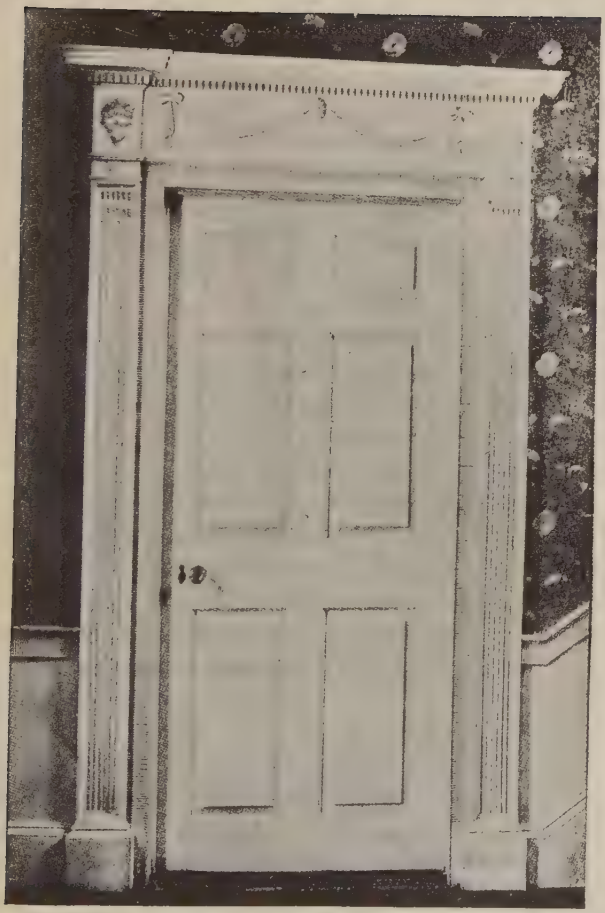
The authors of that work say truly that "variety and the opportunity for comparison render Salem architecture unique and especially valuable in that it embraces three dissimilar types—one might say four, since they were developed in four distinct periods. First came the lean-to, the average date of the examples still standing being about that of the witchcraft delusion of 1692;

next followed the gambrel-roof type about 1750; then came the three-story, square wooden house of 1785, and finally the three-story, square brick construction of 1818. None of these aspires to manorial splendor of the South, but each frankly interprets the refinements, the domestic spirit, and the reasonable degree of dignity of the people, quite as true as in the preposterous period of brick construction as in the earlier years, when the snug comfort of the lean-to sufficed."

The Colonial period was waning as young McIntire entered into the work of building and designing houses for his native town. He was born in 1757, and having learned his trade of carpentry and wood carving with his father, he engaged in business on his own account after his father's death. At this time the country was in the midst of the Revolution, but some of the young carver's best work was done then. One of the best examples of his art, both as architect and as carver, is to be found in the mansion known locally as the Pierce-Johannot-Nichols house, which was erected in 1782.

McIntire was a disciple of Robert Adam, but none of his designs is a servile copy of the British architect. The Salem carver wrought out for himself designs, inspired by the examples of his master, and it may truthfully be said that some of his work is not at all beneath that of the English designer.

McIntire was a remarkable man. He was originally a wood carver, but he had aspirations and designed many of the best looking buildings still to be seen in Salem. He was one of the architects



A DOORWAY BY SAMUEL McINTIRE
From "The Wood Carver of Salem"

who competed with a design for the national capitol at Washington, but, as is well known, he was unsuccessful, the winning design have been made by an amateur, Dr. William Thornton.

As a consequence of having had McIntire for one of her sons, Salem today contains more interesting examples of Colonial interior decorative woodwork than any other part of New England. Indeed, of the same period in which he lived, it is possible that no other section of the country can point to so much of the same kind of work that is good.

There was a finish about his work that proved him to be an artist. He had that great care for detail, that appreciation for proportion and form that made him particularly happy in the expression of the ancient classic motives in wood.

His mantles, fireplaces, doorways, stairs, are excellent, and well worthy of the study that architects in all parts of the country are giving them.

In the period after 1750, New England only began to enter the field of brick construction on an extended scale. Of course, there were here and there some structures composed of brick, but they were exceptions.

Naturally this change of materials was reflected in the design of the architecture. Fortunately the change took place at a time when the newer forms were particularly adapted to reproduction in brick. However, the best examples of the new styles carried out in brick with stone trims, was to be found in Pennsylvania and in the Middle Colonies generally.

CHAPTER XI

PENNSYLVANIA AFTER 1750

THE year of 1750 does not mean a great deal as being either a point of departure or arrival in the architecture of Pennsylvania. By that time there had been evolved a type of red brick house that was to be found in its chief city, Philadelphia, and it was not greatly different from what might have been found in that city years before that time. However, as it is necessary in such a work as this to have reasonable divisions of time for reviewing such progress as was made, the middle of the eighteenth century has been selected as the suitable date for ending one epoch and beginning another.

First of all in order to properly visualize the setting that architecture was to have in Pennsylvania during the period from 1750 until the end of the Colonial regime we should have at hand a few facts, statistical and historical.

In 1750 Pennsylvania, while not the most populous colony, being exceeded by Virginia, which had a population of nearly 300,000, largely on account of its geographical location and the pro-

gressiveness of its citizens, which was a result of its helpful laws, was one of the leading provinces. Its chief city, Philadelphia, with its 15,000 inhabitants in the city proper, which was only a small portion of the present municipality, was the leading city of the country. The province itself had a population of about 185,000, or about 100,000 less than Virginia. All these figures seem in the present time as insignificant, but they must be viewed in their proportionate relation to other towns and provinces at that time.

Philadelphia had become the metropolis of the Western world, and its shipping probably was the most extensive of any place on this side of the Atlantic at that time. Interpreted this means that in Pennsylvania was to be found the largest number of men of affairs, of wealth and of position, although, naturally all of the Colonies could boast of men of mark and many of them are remembered to the present day, while many of those who were highly regarded in Pennsylvania in the middle eighteenth century are today either locally legendary names or entirely unknown to all but the student of historical research.

But the real meaning of all this is that in Pennsylvania there were many rich families, and a large number of moderately rich persons to have an influence upon the kind of homes they erected or lived in. To so great an extent this was not the rule in the other provinces in 1750, although we find still standing many notable old mansions in all of the original states.

A prosperous, wealthy, and cultured people are

necessary for any progress that is made in architecture of a country. Such persons, when they build, are able to afford conveniences, comforts and also to spend money on what is purely sought for its effect upon the spiritual being, that which calls for artistic design. Men live in cabins only when they cannot afford palaces, and the ambitious cabin dweller always has in view the ownership of a more pretentious home. The development of architectural design has been largely dependent upon the wealth of a people. In ancient days only rulers or the men of enormous wealth for their time, could afford to employ an architect to erect their homes. Others were compelled to dwell in homes erected either in part by their own hands, or such assistance as they could afford from mechanics who had not risen to the level of the master builders, or architects.

Even in the period we are discussing architects in the Colonies were merely the more efficient builders, usually carpenters or stone masons. The advent of architecture as a profession in England in the late seventeenth and early eighteenth centuries, caused the publication of numerous books of designs and explanation which were found extremely useful by the American builders until they began, little by little, to originate and develop designs of their own, mainly dictated by the character of the buildings to be erected, and their location.

In the neighborhood of Philadelphia were many quarries of various sorts of stone, none of them particularly good, but being near to the place of building, and cartage being a problem in those

days of horse-drawn vehicles, with roads that were bad at all times of the year, these quarries were gladly called upon to furnish such stone, and a kind of bluish marble they afforded, for buildings erected in that city.

In the examples that survive of that period under discussion there are evidences that the builders were beginning to feel their way securely; that for the first time they were able to throw off restraint of tradition, and do something different. As has been explained they knew that their apprenticeship was at an end because on every side they recognized evidences of increased wealth and culture. In Philadelphia, and its neighbor, Germantown, the class that had accumulated much of the world's goods had become more numerous. In Philadelphia they had already established themselves in what was regarded as fashionable sections, Front street, Arch street and Market street among others, were lined with large houses, all of them more or less of a type, and all of them of red brick.

These Philadelphians had reached a stage where they felt the necessity for summer homes, and in those days they did not have to go to long distant places for their summers as they now do. The Schuylkill river then was a stream of great beauty, although it is to be scarcely believed after one sees it today. On both banks within what are now the limits of the city of Philadelphia the better class of persons erected their summer estates. Usually these included a small farm upon

CLIVEDEN, THE CHEW HOUSE, GERMANTOWN
Built 1760

which they raised the vegetables that were used also in the city home.

The builder therefore had been allowed a little more freedom both in the matter of design and in the selection of materials, to say nothing of the character of the interior finish. Some of the men who had reached the age of retirement and had only to enjoy their incomes lived all the year round in these mansions on the banks of the beautiful river. They had nothing to call them to the city in the winter months, when the roads were in the worst possible condition, so they spent both summer and winter on these estates.

One of the evidences of the improved state of the country might be indicated by what might be regarded as trivial proof. This was none other than the peculiar type of stone lintel. There is a pecularity about the design of this ornamental bit of the window trim that has indelibly associated it with what we call Colonial architecture. Indeed, in the more modern adaptations of this early American style, it sometimes is the only feature which allows of the structure being recognized as of Colonial design. As for the remainder there is that adherence to Greek or Roman models that we call classic.

This stone lintel began to be more generally used as the eighteenth century wore on, especially in Pennsylvania, which appears to be its home. There appears to be a connection between this feature and the increased use of the Pennsylvanian marble, for we find it more common as this native stone was drawn upon in greater quantities for

PALLADIAN WINDOW, CHRIST CHURCH
Erected c. 1735

building operations. It will be found that the stone lintel with the keystone in the middle was not used on dwellings before the middle of the eighteenth century. As a matter of fact its general use was not introduced into building there until after the Revolution. It is true that examples of this design may be found in houses that were erected before the Revolution, especially in Cliveden, the Chew House in Germantown, which was erected about 1760.

In Mount Pleasant, the mansion of Captain John Macpherson, in Fairmount Park, Philadelphia, there are lintels over the windows of the same design, but they are of brick, covered with stucco. This mansion dates from about 1765. In The Woodlands, the seat of the Hamiltons, in Philadelphia, which dates from about 1770, there are no evidences of lintels of this description, which would indicate that this building was merely altered and enlarged in the year assigned from the original structure which dates from 1742.

At the same time a great deal of interest was beginning to be taken with interior ornamentation. The Peters house, at Belmont, although dating from 1742, exhibits some finely modelled ceilings, the time of whose introduction in this country probably is of much later date. Indeed, the period of this form of interior decoration may be said to have begun with the general acceptance of the Adam designs, because all of them reveal the influence of that British architect and designer. Therefore, it may be regarded as a certainty that

Belmont did not receive its ornate ceilings until the last half of the eighteenth century, and very probably was not until after the Revolution.

The original Peters house at Belmont is much smaller than the building which the visitor to Fairmount Park, Philadelphia, today sees standing on the hill. It was a comparatively small structure, as were many of the seats that lined the Schuylkill in the early days. John Penn's seat, Solitude, which now lies within the grounds of the Philadelphia Zoological Gardens, also is a small house for so important a personage, and it, too, has the modelled ceilings, which we know were not placed there until after the Revolution, since the house dates from 1784, and therefore, just outside of the true Colonial period.

But neither Belmont or Solitude are characteristic of Colonial design in Pennsylvania, although both of them display indisputable evidences of having belonged to the period, since both show that leaning to the Classic forms of Greece and Rome that is indicative of the later period American Colonial architecture. Neither of them were grand mansions, but what in these days would be regarded as bungalows.

On the other hand there is no such suggestion about either the Chew House, in Germantown, or the Woodlands, both of which are mansions in size and importance. The Chew House is a good example of the first efforts in Pennsylvania to introduce exterior ornamental treatment, and naturally the ambitious architect overdid the work. The house is entirely too small for the urns that adorn

its façade, and they do not appear to have any excuse for being placed where they are, because the remainder of the front is exceedingly plain. The doorway, which to a certain extent resembles that of Mount Pleasant is not so good in proportion as the latter. Yet, notwithstanding these criticisms the Chew House is one of the best examples of the later Colonial period in Pennsylvania.

In the last half of the eighteenth century the Palladian window so-called, began to be used in dwelling architecture in Pennsylvania and often with better judgment than accompanied the efforts of the New England builders to do the same thing. This window form was rather a familiar one to dwellers in Philadelphia and its surrounding country for a long time before 1750. As has been mentioned one of the best, if not actually the finest example of this design to be found in the country was the one erected in the east wall of Christ Church, Philadelphia, about 1735.

It should be borne in in mind that in those days the Palladian window, was not called by the name of the famous Italian architect, but was known as the Venetian window, although the reason for this is not so plain. One does not find the so-called Palladian window in Venetian buildings, but it may be that a mistake has been made in the allusion to Vicenza, the home of the great architect whose name has been applied to the design. There one will find in the entrance to the house designed by the Palladio and always

THE WOODLANDS, PHILADELPHIA
Showing a Palladian window

called his home, but in which it has been authoratatively asserted he never resided, the suggestion for the design of window that has been so much admired in this country.

It seems that if one really desires to get at the origin of the three-arched window arranged after one of the ancient Orders of architecture, one must go back to the triumphal arches to be found in Rome. The Arch of Constantine, especially shows the arrangement that very well might have sat as the original of the Palladian window. But it will be found that in many of the early churches there have been aranged together three windows, the central arch much higher than those beside it, and it is entirely within the bounds of possibility that this design was not mere arbitrary piece of art, but one that had a deeper meaning for the early Christian, and it was indicative of the Trinity.

It is true that the form which the Palladian window has assumed, that the foundation rests upon the architecture of Palladio. In his Basilica at Vicenza, the arcades, which have won the admiration of all students of architecture, Palladio adapted the Ionic Order to a series of arches, and these were in groups of three, the central arch being semi-circular at the head, and taller than either of those on the sides, both of which latter having the square archatrave and cornice of the same order. Palladio also may have been inspired by the Aqueduct of Hadrian. However, when all the data had been gathered there appears to be excellent reasons for calling this type of

window after the name of the architect who certainly popularized, if he did not actually invent the design. As a matter of fact there does not appear to have been a window designed by Palladio which resembles that which we call by his name. Those which he did design lack the purity and simplicity of that which has made his name known.

While the Palladian window is not the product of America, it is true that here is to be found some of the best examples of this style. In England in the seventeenth century the same style was in use, and one has only to call to mind the garden front of Raynham Park, in Norfolk, England, which was erected in 1636, to see that the idea was gaining foothold in that country. A bow window in Brazenose College, Oxford, which was erected in 1666, is a step nearer the design as we have it in our Colonial architecture, and it seems to be quite possible that in this way, the design descended to America, where it was immediately naturalized.

Fletcher, in his Life of Andrae Palladio, remarks of his arcades: "In the design of his arcades to the entrance halls he appears to have preferred the larger order embracing two stories with small pilasters placed behind them to carry the floor of the upper gallery. In the arcades semi-circular arches usually rest on piers in conjunction with the trabeated arrangement adopted from the ancient baths. A favorite arrangement (*cf.* the Basilica at Vicenza) however, was one in which he divided the interval

between two piers in three parts by small piers or columns with the arch only covering the central aperture, a combination which seems to have been copied from some colonnades at Diocletian's palace." The same author also says that the architect employed the semi-circular Roman window divided into three lights.

The best proportioned Palladian window to be found among American Colonial buildings is that which is in the east front of Christ Church, Philadelphia. As has been remarked it appears to have been the first of its kind introduced in this country, dating, as it does from 1735, or earlier, and we have no available records of a similar design here before that time. It has beautiful lines, with its pilasters of red brick, and its central arch is surmounted by a bust of George II.

While the Palladian window which adorns the south front of the old Pennsylvania State House, now called Independence Hall, Philadelphia, has been much admired, it is not so good in proportion as the other, although dating from a more recent period, 1741, and its details are not so chaste as those in the window of Christ Church. This window in Independence Hall savors of the commercial article that subsequently found its way into many Colonial houses.

Philadelphia has many notable examples of this style of window. That in the east front of St. Peter's Church is much larger and less interesting than that in Christ Church. It was built in 1758-61, and is by no means a model for those who desire a window of this character.

It appears that the Palladian window was

MOUNT PLEASANT, PHILADELPHIA
Built c. 1761

much in vogue for mansions in Philadelphia about this time, or just before the Revolution. Examples, none of them as interesting as the more ancient one mentioned, are to be found in Woodford, in Fairmount Park, which building is variously dated 1742 and 1756; Mount Pleasant, usually called the home of Benedict Arnold, also in Fairmount Park, which was built in 1761; Port Royal, Frankford, Philadelphia, a dwelling that is dated 1762, and the Woodlands, now in the cemetery of that name, which is said to have been erected about 1770, having either displaced the building erected in 1742, or an alteration of that structure. The latter suggestion appears to be the more reasonable one.

The Woodlands contains two Palladian windows used in a manner that does not seem to have been usual in the eighteenth century. It will be noted that where these windows are not found in churches, they are used to light stairways, or halls. In the Woodlands the windows are not used for either purpose, but to illumine apartments. Moreover they are set in recesses in the walls, and while they have been admired for the interesting details in their woodwork and for their proportion, they necessarily are not so imposing as the one in Christ Church.

In the Woodlands will be found one of the best examples of the last days of the Colonial architect in Pennsylvania. Even Philadelphians have not yet generally appreciated the excellence of this structure, and its design. It is entirely unlike anything built in Pennsylvania up to its time, and

while its general façade suggests the mansion known as Whitehall, Annapolis, it will be seen that this resemblance is mainly dependent upon the colonnaded porch.

While each of the Colonies could exhibit certain excellencies in the matter of their architectural design, primitive as it was, Pennsylvania may be said to have largely contributed to the development of the first American style. Upon the work of the early Pennsylvania builders, especially those who worked in the last half of the eighteenth century in Philadelphia, present day architects depend upon much for the spirit that animates their adaptations of the Colonial.

Probably one reason for this is that in and around Philadelphia may still be seen some of the best examples of the various Colonial periods of architecture. Making use of harder materials —brick and stone—there were many things they could introduce that appear out of place when applied to wooden structures, or in those in which wood plays a principal part. This does not mean that the beauties of these old builders' designs are not to be sought for in the details of their wood trim, cornices, and doorways, for they are to be found only there. The stone work, as a rule, was merely ordinary mason's work neither better or worse than that to be found elsewhere, but the complete design, and the assemblage of picturesque features was their own, for they had developed it.

We hear a great deal about the Greek influence in these old buildings, but it is well to remember that this influence came to the Colonies by way of

England, and that their interpretation by British architects and builders pointed the way for the American builder. In England they built stone doorways, while here doorways were of wood, and that meant that the copy required adaptation. It is interesting to note that the adaptation is now more highly regarded than is the original.

CHAPTER XII

BUILDERS, BILLS AND BOOKS

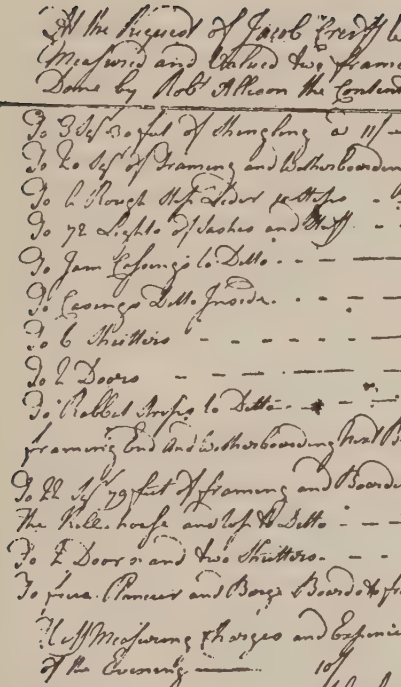
HERE and there the student of historical research occasionally comes across a bill for building in the Colonies, dated in the Eighteenth centuy. So far as the writer's experience goes, no bill for this sort of work earlier than the eighteenth century survives.In the collections of the Historical Society of Pennsylvania there are numerous ancient bills of various descriptions, some of them in the seventeenth century, but he has not discovered among the latter any that had to do with building.

In one of the earlier chapters there was noted the prices paid paid in Medford, Massachusetts, in the seventeenth century for certain kinds of building, including shingling, and other carpenter work, but these are town records, and not the mechanic's bill for his labor and material. If he presented a formal bill, which is doubtful, none of these apparently has been preserved. This leaves us with the proposition that all we can learn from actual bills for building during the

Colonial period is likely to be found dated in the eighteenth century.

It is from town records or Colonial archives that we must look for the names of the men who built during the days before the Revolution. And here we will find nothing excepting as is to be expected, but public buildings. From the records we shall find that it was usual then, as now, to enter into an agreement, or what we would call a contract for all structures of this character. Thus, we find the town of Meadville, Masachusetts, in 1651 entering into an agreement with George Barber, a carpenter, to erect the first mill in that town. The amount to be paid was not reckoned in money, for the town agreed to give Barber and his heirs forevermore, 240 acres of meadow land. If it should be thought that this was a large payment, it should be understood that land was not very valuable anywhere in the Colonies in 1651, and 240 acres, if they were not within the township would not be worth much. However, it establishes that a wooden mill built on the side of a creek, then was worth a piece of land that now would cover more than fifty city blocks in the city of Philadelphia.

In 1763, we know from a document in the Historical Society of Pennsylvania that Robert Smith a carpenter and builder in Philadelphia was paid the sum of £2250 for erecting two three-story houses in that city. That amount reduced to dollars would have meant at the valuation of the time about $6000. Of course in the values of the present day such buildings would have cost four



A PHILADELPHIA CARPENTER'S BILL, 1773

times as much, if constructed in the same manner. But this is a guide to prices.

Owing to the oldest association of master carpenters in this country, whose records go back to the year 1763, and whose other documents and traditions go back to the year of the society's organization, in 1724, we have the names of virtually all the prominent builders in Philadelphia for the last two hundred years. Of course, it would be impracticable here to attempt to list them, but they may be found in a history of the Carpenter's Company, published in 1866. This part of the subject was rather fully covered in the writer's series of Early Philadelphia Architects and Engineers. However, it may be wise to at least review some of these early builders for the sake of completeness.

Probably the earliest builder in Pennsylvania, of whom we have any record, is James Porteus, who, sometime before 1690, erected a mansion for Samuel Carpenter, known to local annals as the Slate Roof House, although there does not appear to be any evidence that it ever had a roof of that material. We also know from records that John Smart and John Brett, two carpenters, erected the Old Swede's church in Wilmington, Delaware, in 1698, and probably had something to do with the erection of the Swede's church in Philadelphia, which was begun in the same year. It seems certain that John Harrison, a carpenter and carver, who erected the interior work on the Wilmington edifice, came to Philadelphia in the early years of the eighteenth century and located

there as a master carpenter. Porteus died in 1737, evidently a very old man; Harrison also lived to be a very old man, and was one of the builders of Christ Church, Philadelphia.

Porteus, Harrison, Joseph Harrison, Joseph Henmarsh, Samuel Powell, Jacob Usher, Edmund Woolley, who built the State House in Philadelphia, since called Independence Hall; Benjamin Clark, and Isaac Zane were the original associators of the Carpenter's Company in Philadelphia, when it was organized in 1724. In the eighteenth century there were some other prominent builders in Philadelphia whose names are recorded in connection with important works they accomplished. There were among them Robert Smith, who built the Walnut Street Jail and who was highly esteemed as an architect-builder and Samuel Rhoads, who erected the Pennsylvania Hospital.

All of these men were master carpenters, and it should be understood that in the Colonial period, and even during the first quarter of the nineteenth century, men of that trade were both the actual builders and the architects of the buildings they erected.

Even where contracts were made with men of other trades, the carpenter on the job was the superintendent of erection. That was very well understood and there were no arguments or contentions about it; it was the regular recognized custom of the time.

The Carpenters' Company, and subsequently, other similar organizations were mainly formed for the purpose of regulating building, and for

aiding their members in the study of architecture. In Philadelphia, and probably in other cities the Common Council, or similar bodies, did pass regulations for building, but they were principally directed for the safety of the work. The carpenters found that prices were not uniform for certain work, and with a view to accomplishing this end they organized.

In those days there did not seem to be such a person as the lowest bidder according to all the information we have on the subject. Prices for every operation or part of a house was calculated to a nicety, and the regular price to be paid was recognized by evèry man in the trade. The selection of a carpenter, therefore was a mere matter of choice and reputation for doing better or quicker work than another carpenter. The price of the work could be estimated in advance to a greater degree of correctness than is possible today. There were not the fluctuation of wages that occur in these days and even in the matter of materials there was no violent and sudden change in prices.

But, as will be shown, the carpenter did not present his bill in the modern manner. That was done by the measurers of the Carpenter'sCompany, who virtually acted as examiners and accountants, whose word was accepted both by the owner of the property and the builder. This method settled disputes at their source, and there were comparatively few in Philadelphia regarding building, unless the undertaking was a large one, where there might arise misunderstandings. However, usually the measurers examined the work, and attested

to the correctness of the price and of the value of the work as done and did not neglect to make a charge for "entertainment" or "the expenses of the evening" as well as their regular fee.

The majority of the bills cited here concern Jacob Graff, a bricklayer whose son erected the house at Seventh and Market Streets, Philadelphia, in which Jefferson wrote the first draft of the Declaration of Independence. Graff would appear to have been a builder or operator and also to have been a brickmaker. In a note addressed him in August, 1759, John Ludd, another builder, and possibly a measurer, wrote:

"I have sent your account of scantling. I have allowed six shillings on Williams Sells account & twenty shillings for the chimney and if you will pay the balance of fifteen pounds three shills. to the bearer Andrew Hissler it will much oblige me who am your Friend, John Ludd."

While we do not know the operation or its extent we have the fact that a small dwelling house chimney was worth about twenty shillings or, in the money of a later time, say, about twenty dollars.

A more comprehensive account is to be had of another operation of Graff's. This bill is dated February 13, 1773, and is signed by the measurer, Abraham Carlile.

This bill has to do with all parts of two small frame houses, excepting the chimneys and fireplaces, which possibly Graff, being a bricklayer, built himself. As the bill is reproduced here in facsimile, it may only be necessary to note that the whole operation cost £36-6-3, and that the

measuring charges and the "expenses of the evening" were charged off at 10 shillings. The carpenter in this operation was Robert Allison.

For the benefit of those who do not understand the methods of the time it might be mentioned that a square was 100 sq. feet, thus, in the bill there are enumerated "three square of shingling at 11 shillings," and "20 square of framing and weather boarding, etc." and this work was set down at little more than the same rate, for the whole came to £15-0-0. Six shutters were worth one pound, five shillings and six pence, and two doors, thirteen shillings. It will be noted that these were very small buildings, but they may give an idea of the prices in the period just before the Revolution.

There is another bill to Graff, dated November 24, 1761. This is for plastering a house, and was due Hastings & Couthorn. From this it will be note that 437 square yards of lath work cost eighteen pounds four shillings and two pence, and that 516 square yards of rendering cost six shillings a yard or twelve pounds, eighteen shillings. The whole plastering job cost thirty-one pounds, two shillings and two pence.

We have a later bill for very much the same kind of work, and one or two items from it may be illustrative. This bill was for carpenter work done by John Crayn for Jacob Graff "at a frame building in 10th Street near Race," in Philadelphia, and it must have been a much larger building. For "10 square, 90 feet or roof grooved weatherboarding, 29 feet of barge board, 30 feet of box 'Cornish', 30 feet of gutter and 7 square 90 feet

of floor boarding," his price was twelve pounds, nineteen shillings and seven pence.

For "29 feet of double raising 20 steps of stairs, 6 windows, box and stud cased, and 83 lights of sashes, 1 small shelf, and 2 sets of mouldings rounds doors and windows," the price was eight pounds, eight shillings and three pence. This whole job was measured by Samuel Jones who calculated the price at a total of fifty pounds, seven shillings and three pence. Evidently there was something that had to be adjusted because the bill was cut down, and forty-seven pounds, twelve shillings and six pence was "agreed to." The date of this bill is October 26, 1785.

From documents in the same collection it is learned that the average price of hauling building materials was three shillings a load, and about a thousand brick was contained in a single load. This much is found in a bill of John Henchman, dated in 1783.

It appears that it was customary, especially on governmental work, to have a banquet when the roof rafters were raised in place, or when the greatest height of the building was reached. Something of this same idea remains until the the present day when the steel constructors will raise an American flag and attach it to the topmost steel girder when it has been raised and attached in place.

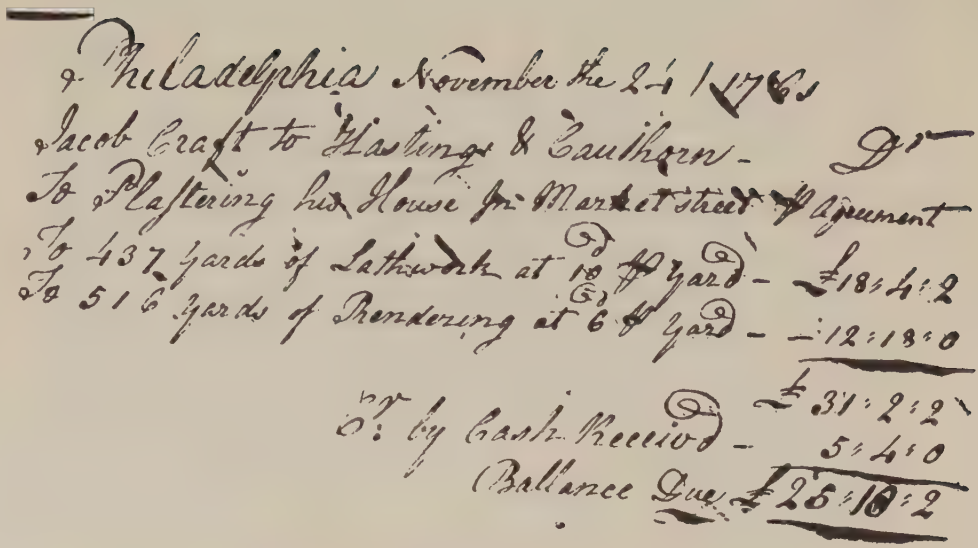
In the Colonial period such an event was signalized by more ceremony and festivity. We have the records of the builder of the State House in Philadelphia, Edmund Woolley, who sent in a

bill for fourteen pounds, twelve shillings and eight pence assigned to "Expense in raising the Tower of the State House." This was dated November 4, 1741. As this bill has some historic interest as well as being an illustration of the methods of the period it is here given in full:

95 loaves of Bread	£0	19	9
61¾ lb. Bacon at 7d.	1	14	1
148½ lb. Beef at 3½d	2	8	1
Potatoes and Greens	0	7	1
800 Limes at 4s	1	12	0
1½ barrels of Beer at 18s	1	7	0
44 lb. Mutton at 3½d	0	12	8
37¾ lb. Veal at 3½d	0	11	0
30 lb. Venison at 2d	0	5	0
Turnips	0	1	6
Pepper and Mustard	0	1	5
2 Jugs and Candles, Pipes and Tobacco	0	6	0
Butter, 9s, 8d; Turkey, 4s; 4 pair Fowls, 9s	1	2	8
½ of a hundred of Flour	0	3	6
Two former Hookings at getting on two Floors, and now for raising the Floor, Fire Wood, etc.	3	0	0
	£14	12	8

The Carpenters' Company had a Book of Prices and a standing Committee on Prices, but they were secretive about both, and evidently were working toward that style of monoply which was characteristic of the ancient Guilds of England. The Book of Prices could only be viewed in the Hall of the Company, and of course only exhibited to members. This system finally led to the formation of other independent societies of carpenters in Philadelphia, and about the year 1800 the company relented and published the Book of Prices.

This Company did not have any regular Measurers, but gave certificates for measuring work to members. The by-laws stated that any member



Philadelphia November the 24 1761

Jacob Craft to Hastings & Cauthorn — Dr

To Plastering his House in Market street Agreement

To 437 yards of Lathwork at 10 ₰ Yard — £18:4:2

To 516 yards of Rendering at 6 ₰ Yard — 12:18:0

£31:2:2

Cr by Cash Received — 5:4:0

Ballance Due £26:18:2

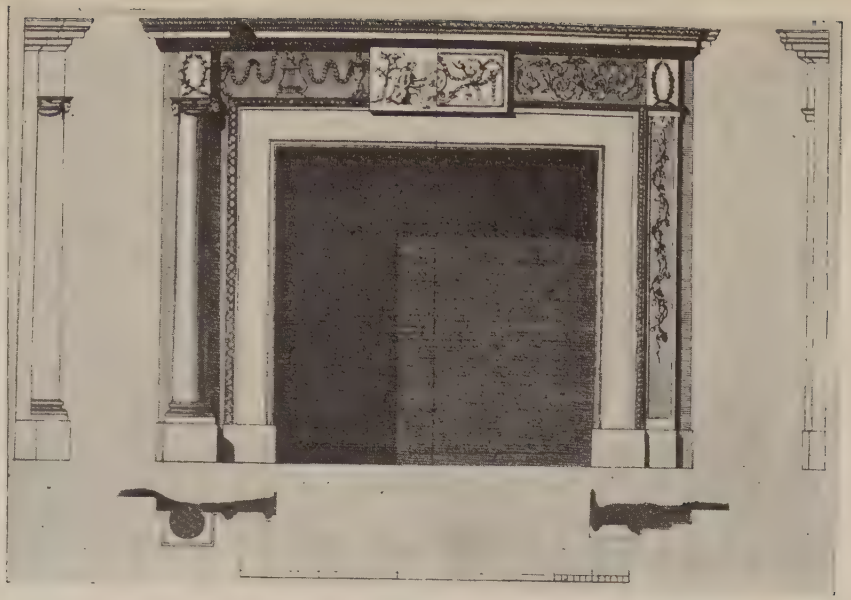
BILL FOR PLASTERING, PHILADELPHIA, 1761

might obtain such a certificate, "provided always, that such applicant before he receives his certificate, shall make an oath or affirmation, before an Alderman or Justice of the Peace, that he will well and truly measure and value carpenter work agreeably to the Standard Book of Prices of the Company, etc." These By-laws, it should be mentioned, were passed in 1790, but it appears to have been the rule of the organization for years before that time.

The upshot of the proceeding was to force into existence another organization of House Carpenters in the City of Philadelphia. This association became known as the Practical House Carpenters Society, and was actually incorporated in 1811, although it seems to have been in existence since the year 1786. In 1812 this organization published its book of prices as a kind of challenge to the older body. The volume is an excellent guide to prices of the later period of the Colonial and the first years of the American Government.

It would be impracticable to attempt to reprint this extensive list, which is very detailed and accounts for every stick of wood that then went into the building. However, one quotation that seems to have a bearing on the Colonial architecture may be given. This list refers to Pilasters, and it appears in both the first Book of Prices, that of 1812 and the second book, that published in 1819. There is some difference, and the quotations will be taken from the former volume.

PILASTERS	Cents
Plain 5½ inches wide, per foot lineal.....	14



DESIGN FOR FIREPLACE, BUILDER'S MAGAZINE, 1778

Open do, same breadth, per foot lineal..... 20
Ditto fluted do. do. 30
Ditto counter do. to parts so done..... 26
If broader than 5 inches, add per inch 2 to..... 4
Attic bases to Pilasters 5½ inches wide, each from 60 to 67
Capitals, plain, each from.....50 to 75
Plinths with sub-plinths, each from.....33 to 50
Ditto of red cedar or mahogany, each.....40 to 67

These quotations will give some idea of the prices for this kind of work, but if one is more interested he should consult the volumes themselves for fuller information.

In New England, also, they had their books of prices, but, as will be seen from a few quotations from the "General Rules of Work for Housewrights in Newburyport," Massachusetts, which was published in 1803, and, consequently, after the Colonial period, but closely connected with that time, they had a different system of computation. It will be made apparent from a study of these books that skill that was better than the average did not appear to count for a great deal. It probably only had an influence in bringing to the possessor of remarkable ability work that his lesser able competitors failed to obtain.

This Newburyport book is interesting in showing what was regarded as a day's work in New England, in 1803.

Framing wooden buildings, 125 superficial feet per day's work.

Beams not joisted, 200 ditto per day.

Beams and plates for brick buildings, 125 feet per day.

All kinds of angular framing, 100 feet per day.

Hewing and raising paid for by the day.

Making a door frame for brick building from 3 to 4 feet wide, and from 7 to 8 feet high, 2½ days per frame.

Ballustrades with turned bannisters and broke round posts, 3 feet per day.

Plain shingling, 100 superficial feet per day.
Shingling hips, 20 feet running measure per day.
Pilasters, equal to the Tuscan order, including pedestal and cornice, 4 feet per day.
Do. equal to the Ionic, 40 days.
Do. equal to the Doric or Corinthian, 50 days.
If circular, add 10 days.
Finishing Venetian window, equal to the Tuscan order, 7 days' work.
Do. equal to the Ionic, 10 days.
Do. equal to the Doric or Corinthian, 12 days.

As one may believe that the methods of work had not advanced a great deal in efficiency, since the Colonial period, we here have a fair idea of both the time required on certain parts of the later Colonial house and the cost of such work.

In the "Country Builder's Estimator, or the Architect's Companion," published in London in 1758 (Sixth Edition) the author, William Salmon, jun., devotes a chapter to showing how the builder is to apply the rules he has set down for him. As this part of the work gives an insight into the methods of the time, a few of the paragraphs may be quoted here:

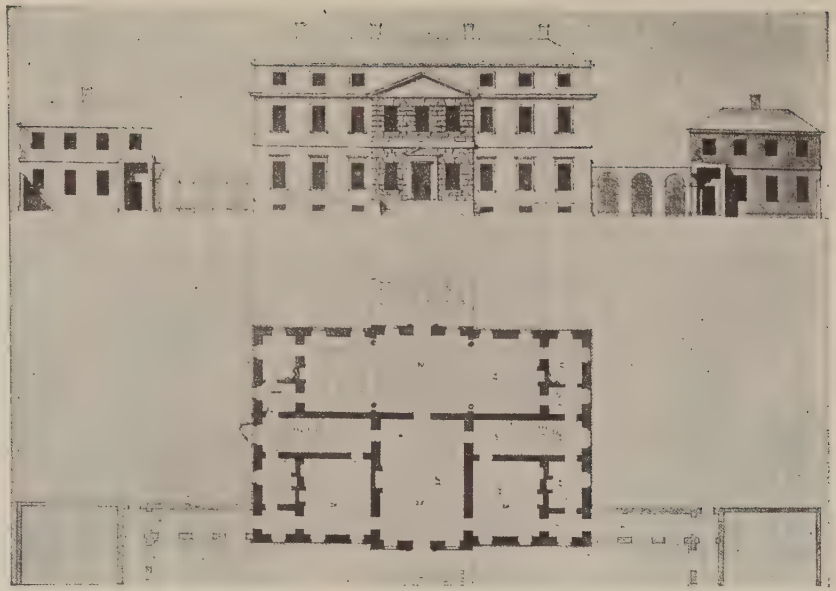
"As it is necesasry for every person before he begins to erect a building," remarks the author, "to have designs or draughts drawn upon paper, vellum, &c. as well as for ease and expedition, as for preventing mistakes in the carrying on of the intended design; so likewise it is absolutely necessary for the prevention of errors in estimating the charge thereof. And in large structures, it is not amiss if a Model be made of the whole, either in pasteboard, wood, clay, or the like, whereby the fabric would be seen at once in miniature; however, when you are to estimate the

charges of erecting any building, the length, breadth, height, etc. being given, first draw a draught of the ground plot or ichnography of each floor in a particular paper by itself, with the length, breadth and height of each apartment intended; because many times the conveniences or contrivances in one story differ from those in another either in bigness of chimnies, or division of the rooms, some being larger in one story than in another; as also the form and fashion of each front, together with doors,, windows, and ornaments (if any be designed), are to be shown in the orthographies, or draughts of the uprights. And if for a timber building, the scantling or dimensions of every particular piece, I would advise be set in its proper place to which they belong in the diagram, in characters, which will be of use to the workmen, in carrying on their work more readily, as well as for estimating the charge.

"The draught being drawn, and the dimensions of every particular being inserted as before described, you may then proceed to the estimation thereof."

In 1799, there was incorporated in Philadelphia the Bricklayers' Company, and this organization continues to the present day. Like the Carpenters' Company it was a trade association and gave some attention to relieving distress of its members. At the same time it arranged prices for bricklaying work, as the Carpenters' Company did for the work of the carpenters, who were its members.

It has been obvious that during the eighteenth



DESIGN FROM GIBB'S "BOOK OF ARCHITECTURE,"
which served as model for Pennsylvania State House

century the American builder was assisted by using books published in England for tradesmen who were deficient in architectural knowledge, and not any too competent in estimating for work done, or to be done.

What appears to have been the origin of the design for the State House in Philadelphia, now known as Independence Hall, is to be found in one of these books. This was the work of James Gibbs, one of the contemporaries of Sir John Vanbrugh. His "Book of Architecture," was a large folio, filled with ingenious and artistic designs for houses, and parts of buildings, and was published in 1728, or about the time Andrew Hamilton was agitating for a new State House in Pennsylvania. It will be noted that there are marked resemblances between Gibbs' design and the building as we know it.

In 1774 Francis Newbery, who may be best recalled as Oliver Goldsmith's publisher, began the publication of what probably was the first magazine relating to architecture and building. This was called "The Builder's Magazine," but it really was merely the publication of a book in parts, and not a magazine even in view of its time. The parts each consisted of several pages of a glossary on architecture, and a few plates with decriptive text. This work continued until 1778. Usually it is found bound in a single volume, quarto. Sometimes it bears the date of 1774 on the title, and sometimes it is announced as "Second edition" and the date is 1779. In all 185 plates were issued in this work, but so far as the American builder was concerned, he could only

use them for suggestions, as the designs did not meet the tastes or demands of the Colonists. One of the plates as reproduced here is one that may have been useful, for it pictures a fireplace and mantel.

Many of the architectural books contained designs for ceilings, and paneled walls, as well as staircases of different dimensions. But the American builder interpreted all of this to suit his requirements, and probably no American building may be said to have been an exact copy of any one of the various designs which evidently were used by the Colonial builder.

BIBLIOGRAPHY

This list is not intended to be more than suggestive. In the main it includes the volumes consulted in the preparation of this book, and is by no means complete.

Builder's Magazine, The: or a Universal Dictionary for Architects, Carpenters, Masons, Bricklayers, etc. By a Society of Architects. The Second Edition. London, 1779. Illustrated. 4to.

Burke: Account of the European Settlements in America. In two volumes. London, 1757. 8vo. Maps. [This work is attributed to Edmund Burke.]

Canada: Hand Book of the Dominion of Canada. By S. E. Dawson, Montreal, 1884. Maps. 12mo.

Carrel's Illustrated Guide and Map of Quebec: Sm. Sq. 12mo. Quebec, 1922 (21st Edition).

Colonial Architecture of Salem, The: By Frank Cousins and Phil. M. Riley. Illustrated. Boston, 1919. 8vo.

Colonial Architecture of Philadelphia, The: By Frank Cousins and Phil. M. Riley. Illustrated. Boston, 1920. 8vo.

Colonial Churches in the Original Colony of Virginia: A series of sketches by especially qualified writers. 35 illustrations. Second Edition, revised and improved. Richmond, Va., Southern Churchman Company, 1908. Sm. 8vo. pp. 317.

Crunden: Convenient and Ornamental Architecture, Consisting of Original Designs for Plans, Elevations, and Sections. Engraved on seventy copper plates. By John Crunden, Architect. A New Edition. London, 1788. 4to.

Dix: Champlain, the Founder of New France. By Edwin Asa Dix, M.A., LL.B. Illustrated. New York, 1903. 12mo.

Dyer: Creators of Decorative Styles. Being a Survey of the Decorative Periods in England from 1600 to 1800, with Special Reference to the masters of Applied Art Who Developed the Dominant Styles. By Walter A. Dyer. Illustrated with sixty-four pages of photographs. Garden City, N. Y. 1917. 8vo.

Edgar: Colonial Governor, A, of Maryland. By Lady Edgar. Illustrated. London, Longmans, Green & Co., 1912. 8vo.

Eggleston: Beginners of a Nation, The. By Edward Eggleston, Maps. New York, 1897. 8vo.

General Rules of Work for Housewrights, in Newburyport. Newburyport, 1805. Sm. 8vo.

Glenn: Some Colonial Mansions and Those Who Lived in Them. By Thomas Allen Glenn. Illustrated. Philadelphia, 1900. Two Series.

Gotch: English Home, The. From Charles I to George IV. Its Architecture, Decoration and Garden Design. By J. Alfred Gotch, F.S.A., F.R.I.B.A., with upwards of 300 illustrations. New York (London), Charles Scribner's Sons, N. D. (1918). 8vo. pp. 410.

Gwilt: An Encyclopædia of Architecture, Historical, Theoretical and Practical. By Joseph Gwilt, F.S.A., F.R.S.A. Illustrated with about 1,700 engravings on wood. Revised, rewritten with additions (in 1888). By Wyatt Papworth. New Edition (with corrections). London, Longmans, Green & Co., 1894. 8vo. pp. 1443.

Harshberger: Botanists of Philadelphia and Their Work, The. By John W. Harshberger, Ph.D. Philadelphia, 1899. Illustrated. 8vo. [Privately printed.]

Heathcote: Short Critical History of Architecture, A. By H. Heathcote Statham. 585 illustrations. London, B. T. Batsford. New York, Charles Scribner's Sons, N. D. (1912). Sm. 8vo. pp. 586.

Historical Magazine, and Notes and Queries, concerning the antiquities, history and biography of America. Morrisania, N. Y., Henry B. Dawson, Vol. I, 1867. Sm. 4to.

Jackson: Early Philadelphia Architects and Engineers. By Joseph Jackson. Illustrated. Philadelphia, 1923. Large 12mo. Privately printed. [This work originally appeared serially in the magazine *Building*, during the year 1922–23.]

Jamaica: History of Jamaica, A New, from the Earliest Accounts of the Taking of Porto Bello by Vice-Admiral Vernon. In thirteen letters from a gentleman to his friend. The Second Edition. Maps. London, 1740. 8vo.

Janvier: Dutch Founding of New York, The. By Thomas A. Janvier. Illustrated. New York and London, Harper & Brothers, 1903. 8vo.

Kimball: Domestic Architecture of the American Colonies and Early Republic. By Fiske Kimball. Illustrated. New York, Charles Scribner's Sons, 1922. 4to.

King: New Orleans, The Place and the People. By Grace King. With illustrations. New York, 1895. 8vo.

Leiding: Historic Houses of South Carolina. By Harriette Kershaw Leiding. 100 illustrations. Philadelphia and London, J. B. Lippincott Company, 1921. 8vo. pp. 318.

Lodge: Short History, A, of the English Colonies in America. By Henry Cabot Lodge. New York, Harper & Brothers, 1881. 8vo.

MacKennal: Homes and Haunts of the Pilgrim Fathers. By Alexander MacKennal, D.D. Illustrated. London, The Religious Tract Society; Philadelphia, J. B. Lippincott Company, 1899. 4to.

Medfield: History of the Town of Medfield, Massachusetts, edited by William S. Tilden. Illustrated. Boston, George H. Ellis, 1887. 8vo.

O'Callaghan: Documentary History, The, of the State of New York. By E. B. O'Callaghan, M.D. Vol. II. Illustrated. Albany, Charles Van Benthuysen, Public Printer, 1851. 8vo. pp. 1144.

Palladio: First Book of Architecture, by Andrea Palladio, The. Translated out of Italian, with an Appendix Touching Doors and Windows. By Pr. Le Muet, Translated out of French. By G. R. [Godfrey Richards]. Plates. London, 1663. 4to.

Primatt: City and Country Purchaser and Builder, The. Two Books, Composed by S. P. Gent [Stephen Primatt]. The Second Edition, much enlarged by William Leybourne. By whom is also added a Third Book, showing how to dispose and proportion the several rooms of a building. Illustrated. London, 1680. Sm. 4to.

Quebec: Old Quebec, the Fortress of New France. By Gilbert Parker and Claude G. Bryan. With illustrations. New York, 1903. 8vo.

Salmon: Country Builder's Estimator, The: or the Architect's Companion. By William Salmon, Jr. The Sixth Edition, carefully revised and corrected, with many large additions and alterations. By E. Hoppus, Surveyor. London, 1758. Sm. 4to.

Thwaites: Epochs of American History: The Colonies 1492–1750. By Reuben Gold Thwaites. Tenth Edition, revised. New York, Longmans, Green & Co., 1897. 12mo. Maps.

Wallington: Historic Churches of America. By Nellie Urner Wallington. Illustrated. New York, Duffield & Company, 1907. 8vo.

Watson: Historic Tales of Olden Time: Concerning the Early Settlement and Advancement of New York City and State. By John F. Watson. Illustrated with lithographs. New York, Collins and Hannay, 1832. 16mo. pp. 214.

Watson: Historic Tales of Olden Time, Concerning Philadelphia and Pennsylvania. Illustrated with lithographs. Philadelphia, E. Littell and Thomas Holden. 16mo. pp. 316.

Watson: Annals of Philadelphia and Pennsylvania in the Olden Time. By John F. Watson; enlarged with many revisions by Willis P. Hazard. Illustrated. Philadelphia, Edwin S. Stuart, 1884. 3 vols. 8vo.

Westcott: Historic Mansions and Buildings of Philadelphia, The, With Some Notice of Their Owners and Occupants. By Thompson Westcott. Illustrated. Philadelphia. N. D. [1877]. Sq. 8vo.

White Pine Series of Architectural Monographs, The. Published under the direction of Russell F. Whitehead, Architect. New York, 1915–1923. 4to. Beautifully illustrated.

Wood Carver of Salem, The. By Frank Cousins and Phil. M. Riley. Illustrated. Boston, 1916. 8vo.

Wood: Dissertation Upon the Orders of Columns, and Their Appendages; the Whole Constituting the Orders of Architecture. By John Wood, Architect. Plates. London, 1750. Sm. 4to.

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